Development of a Coding System to Accurately Categorize the Causes of Construction Fatalities and Serious Injuries

by

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Approved by

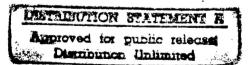
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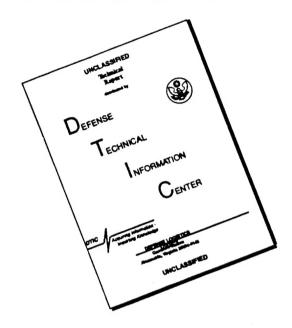
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CHAPTER 1

INTRODUCTION

There are approximately 910 construction worker fatalities in the United States each year (National Safety Council, 1995). Although construction workers constitute only 5.2% of the industrial workforce, they account for over 18.4% of the fatalities and 10.6% of the injuries (Gambatese 1996). The only industries that have higher fatality rates are mining and agriculture.

One of the functions of the Occupational Safety and Health Administration (OSHA) is to investigate and track occupational injuries and fatalities. OSHA's involvement is reduced in the state-plan states; however, these states are still encouraged to contribute such data to OSHA. This information is recorded in OSHA's Integrated Management Information System (IMIS). While various types of information are recorded, particular interest exists in the basic types of causes associated with fatalities and injuries. OSHA classifies all accidents into six event types: Falls, Struck by, Struck Against, Caught In or Between, Shock, and Other.

The accident classifications are designed to provide insight into causation. Despite this, it is felt that the current classification system has numerous shortcomings. The primary failure is that the six event types do not adequately categorize the actual accident causation. In fact, the category "other" historically has accounted for an exceptionally high percentage (about 10%) of incidents.

This thesis was undertaken to develop a system of cause codes to accurately categorize the primary causes of fatalities and related injuries in the construction industry. The information contained in the OSHA database can be extremely useful to contractors and safety professionals if it can be presented and summarized in a usable and detailed format. If the actual causes of injury can be targeted and tracked, it is felt that the current fatality rate can be decreased significantly. Accurate information on the causes of accidents is fundamental to the success of such efforts.

CHAPTER 2

BACKGROUND

2.1 INTRODUCTION

The Williams-Steiger Act, also known as the Occupational Safety and Health Act of 1970 (OSH Act), was passed by Congress to increase safety awareness in the United States, and contained special provisions for the construction industry due to the high proportion of fatalities occurring in construction. OSHA was formed and tasked with tracking accident statistics. OSHA created the Integrated Management Information System (IMIS) database to manage the information collected on accidents. This database is primarily used by OSHA to produce statistics. Considerable amounts of useful information can be generated from the database.

Currently, six categories (Falls, Struck By, Struck Against, Caught In or Between, Shock, and Other) exist for classifying the causes of accidents in the construction industry. These categories are very general and provide limited useful data since a wide range of accidents fit into each of the areas. The category "Struck Against" is essentially unused, while approximately 10% of the fatalities have been categorized as "Other". Accident classification information would be useful for safety managers and construction professionals if the information would be specific to their actual work classification and if the cause codes clearly defined the accident type.

In addition to the coded information related to injuries and fatalities, most OSHA accident investigation reports recorded in the OSHA IMIS database contain an abstract which summarizes the events surrounding the accident. These abstracts tend to consist of a single paragraph, written in a style comfortable to the individual investigating OSHA compliance officer.

2.2 LITERATURE REVIEW

Although extensive research has been conducted on how to reduce injury and fatality rates in the construction industry, very few have reviewed the OSHA coding system to determine if it contains clear and useful data.

Only a handful of literature sources were located which reference the OSHA coding system. The first of these was an "Analysis of Fatalities Recorded by OSHA" (Hinze and Russell 1995). In this paper, the authors used OSHA's IMIS to examine the causes of past injuries. It was felt that knowledge of past injury causation would help in preventing future injuries. The researchers used data from 1980, 1985, and 1990 to identify possible trends. While some trends were identified, the authors noted that the coding of event types appeared to be inconsistent and then provided numerous example cases. In their recommendations, they stated that the information contained in the database can only be helpful if it is clearly and consistently entered into the system. They further recommended that the coding system be examined to determine if a different coding system would be more appropriate. They felt that more accurately defined codes might allow for more consistency in the information entered into the database. This would make the resulting information more usable.

Several theses have identified the need for a revised coding system. In her thesis entitled "Investigation of Equipment Related Injuries and Fatalities in Construction", Bernandine I. Thomson (1996) recommended that the abstracts in the OSHA IMIS database be more clearly written and that the coding be more precise as to the primary cause of the accident.

David C. Bren (1995) analyzed construction fatalities and injuries due to powerline contacts in his thesis and recommended that more detail be included in the abstracts, as well as accuracy in data entry. He also noted the lack of accurate coding as a fault of the current system.

Katherine Bren (1996) completed her thesis on construction fatalities and injuries due to trench cave-ins. She strongly recommended a coding system which accurately reflects the primary cause of the accident. She found that "cave-ins" were placed in either "struck by", "caught in/between", or "falls" with no real consistency. She also recommended that the abstracts be more carefully written to eliminate the grammar and logic errors which were found in many abstracts. She felt that a standard form might eliminate some of the ambiguity the OSHA database currently contains as to the actual facts of each accident.

The final reference was a report prepared by OSHA (U.S. Department 1990). OSHA analyzed the causes of construction fatalities from 1985-1989 and made conclusions about the causes of fatalities in the construction industry (see Table 2.1).

Table 2.1 Construction Fatalities Investigated by OSHA from 1985-1989*

Source of fatality	Percentage of all fatalities (%)
(1)	(2)
Falls	33
Electrical Shock	17
Struck by	22
Caught in/between	18
Other	10
*From "Analysis of construction fatal	ities- the OSHA database 1985-1989", (U.S.

^{*}From "Analysis of construction fatalities- the OSHA database 1985-1989", (U.S. Department 1990).

It is clear from Table 2.1 that the current coding system is extremely broad in nature since each code covers a wide range of accidents. For example, the code "Struck By" includes accidents involving equipment, handling of material, falling material, and cave-ins. The "Caught In/Between" classification includes numerous accidents involving equipment, material, cave-ins, and others. It becomes a "judgment call" for the investigating officer to place the accident into one of the event types. Additionally, the data is in such broad categories that it is of limited utility to the construction professional.

Most of the references listed above recommended four common items: 1) all states should be required to report their accident data to OSHA; 2) abstracts should be more clearly written; 3) data entry should be performed with more attention to detail; and 4) the coding system should be specific in nature. The goal of this thesis was to focus on the coding deficiencies and develop a new coding system to accurately classify the causes of fatalities and related injuries in the construction industry.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The goal of this research was to develop a revised coding system to accurately categorize the causes of accidents and fatalities in the construction industry. The research was conducted in four stages: data acquisition from OSHA's IMIS, development of a new coding system, data compilation for the new codes, and data analysis. The development of the new coding system evolved into its final form during the data compilation stage and therefore, these two sections will be presented together.

3.2 DATA COLLECTION

OSHA maintains a database of fatalities and injuries occurring throughout the United States in various industries. The database used for this study was OSHA's IMIS which contains accident information on all industries. The database can present or sort various types of information. The data contains encoded information of various types, including victim age, craft, type of injury, amount of fine, amount of fine actually paid, etc. In addition, the database contains an abstract which is a narrative description of how the accident is presumed to have occurred. OSHA's Region 10 office isolated and sorted the data for all fatalities in standard industrial classification (SIC) codes 15, 16, and 17 (construction industry) for years 1994 and 1995. The data report included data from January, 1994 through December, 1995. The data provided by Region 10 included 894 pages of information which resulted in 954 incidents over the two year period. The following information was provided in the OSHA reports: location, date, SIC, type of citation, abatement status, amount of penalty, abstract of the incident, age and sex of the victim, event type, extent of injury, environmental factor, human factor, and hazardous factor. In addition, the database contained information of the violations, penalties and correctional actions required of the employer.

3.3 DEVELOPMENT OF THE NEW CODING SYSTEM AND DATA COMPILATION

The current OSHA construction injury event types include the following: (1) Falls; (2) Struck By; (3) Struck Against; (4) Caught In/Between; (5) Shock; and (6) Other. Since these codes were assumed to not adequately describe the various causes of injury and death, modifications were sought. Using the six OSHA categories as a baseline, refinements were made. The initial revised coding system was developed as shown in Table 3.1.

Table 3.1 Event Types- Version 1

Cave-in	Confined Space
Drowning	Heavy/Earth Moving Equipment
Electrocution-	Falls-
OH power lines	Temporary Structures
Faulty Tools/Cords	Permanent Structures
Other	Other
Lockout/Tagout-	Material Handling Equipment-
Electrocution	Surface Equipment
Mechanical	Manual (Equipment not
Other	Responsible)
	Cranes/OH Equipment

Using these revised codes, the 1994 data began to be evaluated and the cause of death was described by assigning the new code categories to the fatality cause. After reviewing 30 cases, it was found that the codes in Table 3.1 did not adequately describe the causes of death for all cases. As a result, the checklist shown in Table 3.2 was developed. This checklist, as it evolved, contained 15 cause codes that could be viewed as primary, with additional information providing extra details that would further describe the circumstances at the time of the accident. This checklist was used to categorize the first 120 cases. A Microsoft Access database was used to contain the data generated for each case number.

Most information used to assign the proper cause codes was contained in the case abstracts. Unfortunately, some of the abstracts were so poorly written that the facts of the accident could not be deciphered from the text. In other instances, the abstract would be repeated verbatim for two different companies and incidents. These duplicated cases were discarded from the database.

Table 3.2 Checklist- Version 2

Event Types- Check one of the following:		
☐ Asphyxiation (toxic gases)		
☐ Caught in/between Equipment	☐ Caught in/between Material	
☐ Cave-in (excavation/tunneling)	□ Cave-in (trench)	
☐ Electrocution (faulty existing wiring)	☐ Electrocution (power lines)	
☐ Electrocution (faulty const. tool/wiring)	□ Other	
☐ Fall from elevation	☐ Fall from ground level	
☐ Struck by equipment	☐ Struck by falling Materials	
☐ Struck by material		
Respond to all of the following:		
Lockout/Tagout?	yes no unknown	
Confined Space?	yesnounknown	
Cause involved other crew members?	yes no unknown	
Type of large equipment involved? (equip w/ a driver- scraper, dozer, etc)		
Type of tools or small equip.involved?		
(hammer, wrench, hand compactor, saw,		
etc)		
Number of workers injured and/or killed?		
Type of materials involved?		
Type of materials handling?	hoisting/lowering moving laterally altering	
Temporary structure involved?		
Permanent structure involved?		
Type of project?	new construction repair	
	renovation unknown	

After the first 120 cases had been encoded, "Explosion/Fire" and "Natural Causes" were added as event types. The secondary category "Other crew members involved" changed to "others involved". Further evaluation was conducted using the added cause code categories. At case number 185, three other secondary sections were added- "Fall height/Trench Depth", "Fall Protection/Shoring/Personal Protective Equipment (PPE) used", and "Caused by the subject". The last major changes to the checklist were made at case number 400. Under event types, an "Electrocution-Other" category was added for cases which were clearly electrocutions but did not fall into one of the other electrocution sections, and "Electrocution-building power" was added for those accidents which involved a building power system which was functioning properly. Secondary sections were also added: age and sex of the subject, SIC, number of workers injured separated from number of workers killed, natural factors such as weather, vehicle type (project vehicle or privately owned vehicle), and type of work performed by the subject at the time of the accident. A comments category was added for those cases where supplemental information was required to explain how the subject was killed or injured. The final checklist is shown in Chapter 4.

The resulting database contained 954 records which included 976 fatalities and 106 related injuries.

3.4 DATA ANALYSIS

The data from the Microsoft Access database was exported to Microsoft Excel for analysis. The data was examined to determine how the fatalities were distributed among the 19 cause codes. In addition, the revised coding system was checked or validated. This was done by first selecting (at random) thirty cases from the OSHA database. The information from these cases was given to two graduate students at the University of Washington who had no knowledge of either the current OSHA system or the revised system. The objective of having graduate students use the codes served as a means of

validating the revised cause codes. Each student was asked to classify the causes of OSHA fatalities by using the revised coding system. Instructions for the checklist were provided as shown in Appendix A. The following chapter summarizes the findings of both the data analysis and audit.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

The current OSHA coding system consists of six event types. This research was undertaken to develop a new coding system with more specific categories to more accurately classify the causes of accidents and fatalities in construction. The new coding system will be presented, followed by the findings from using this new coding system on OSHA's data for 1994-1995.

4.2 NEW CODING SYSTEM

The final version of the revised coding system consisted of a checklist of causes as shown in Table 4.1. There are nineteen primary causation factors which are used for classifying the event type which caused the accident. In addition, secondary causation and related factors are included to provide additional information surrounding the accident. These include information such as sex and age of the victim, the type of project, etc..

Table 4.1 Checklist, Final Version

Primary Event Types- Check one of the following:		
☐ Asphyxiation (toxic gases)	☐ Drowning	
☐ Caught in/between Equipment	☐ Caught in/between Material	
☐ Cave-in (excavation/tunneling)	☐ Cave-in (trench)	
☐ Electrocution (faulty existing wiring)	☐ Electrocution (power lines)	
☐ Electrocution (other)	☐ Electrocution (faulty const. tool/wiring)	
☐ Electrocution (building power)	☐ Explosion/Fire	
☐ Fall from elevation	☐ Fall from ground level	
☐ Struck by equipment	☐ Struck by falling Materials	
☐ Struck by material	□ Other	
☐ Natural Causes		
Secondary Information- Respond to all of	the following:	
Lockout/Tagout? _yes _no _na	Confined Space? _yes _no _na	
Fall height: (feet)	Fall protection used?	
	_yes _no _na	
Personal Protective Equipment used?	Trench shoring used?	
_yes _no _na	_yes _no _na	
Trench Length: (feet)	Trench Depth: (feet)	
Others involved? yes no unknown	Caused by the subject? yes no unknown	
Type of large equipment involved?	Type of tools or small equip.involved?	
(equip w/ a driver- scraper, dozer, etc)	(hammer, wrench, hand compactor, etc)	
Vehicle Type:projectprivatena	Number of workers killed?	
Number of workers injured?	Natural factors: (wind, rain, lightning, heat, etc)	
Time of accident: AM/PM	Sex of subject:	
Age of subject:	Type of materials involved?	
Type of materials handling? hoist/lower		
lateral altering	repair renovation unknown	
Temporary structure involved?	Permanent structure involved:	
Work Type: (painter, electrician, etc)		
Comments:	(if none, so state)	

Table 4.2 demonstrates how the original six event types relate to the new primary event types. As is shown, the new system contains nineteen event types and provides more specific codes for the actual accident. Electrical Shock translates into five different electrocution event types (building power, faulty construction tool/wiring, faulty existing wiring, power lines, and other). Falls divide into Falls from Elevation and Falls from Ground Level. The Struck by event type now consists of Struck by Equipment, Falling Material, and Material, while Caught in/between contains Caught in/between Equipment and Material. A completely new cause code was created, Cave-ins, which contains incidents which used to fall under either Struck by or Caught in/between. The event type Other shows the most diversity since it now contains miscellaneous codes such as Asphyxiation, Drowning, Explosion/Fire, Natural Causes, and Other. The event type Struck Against is never used by OSHA and has been included in the codes Struck by and Caught in/between.

Table 4.2 Relationship Between Original Event Types and New Coding System

Original system	New system	
Electrical Shock	Electrocution (building power)	
	Electrocution (faulty const. tools/wiring)	
	Electrocution (faulty existing wiring)	
	Electrocution (power lines)	
	Electrocution (other)	
Falls	Falls from elevation	
	Falls from ground level	
Caught in/between	Caught in/between Equipment	
	Caught in/between Material	
	Cave-in (Excavation/Tunneling)	
	Cave-in (Trench)	
	(* Cave-ins may have also been coded as a	
	Struck by Incident)	
Struck by	Struck by Equipment	
	Struck by Falling Material	
	Struck by Material	
Struck Against	Contained in above category	
Other	Miscellaneous:	
	Asphyxiation	
	Drowning	
	Explosion/Fire	
	Natural Causes	
	Other	

4.3 FINDINGS USING THE NEW CODING SYSTEM- PRIMARY EVENT TYPES

With the use of the new coding system, the 1994-1995 data was analyzed by determining the primary causes of construction worker fatalities. The analysis was conducted independently for the 1994 data and the 1995 data. There were 691 fatalities and related injuries in 1994, and 391 in 1995.

Figure 4.1 depicts the results of using the new coding system on the data from 1994. Note that the causation factors have been consolidated into broader groupings for comparison with earlier data. The majority of the fatalities and related injuries were in the event type "Falls" (33%), followed by Electrocutions (18%), Struck by (18%), Miscellaneous (15%), Caught in/between (10%), and finally, Cave-ins (6%).

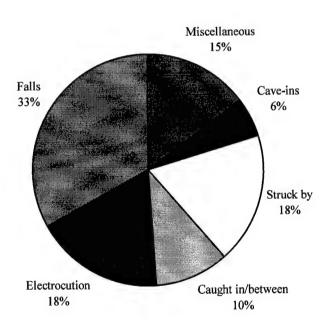


Figure 4.1 Construction Fatalities and Related Injuries, 1994

Figure 4.2 shows the results of using the revised coding system on the 1995 data. The percentages changed slightly, with Falls increasing to 35%, Electrocutions up to 23%, and Struck by incidents at 19%. Caught in/between remained constant at 10%, while Miscellaneous dropped to 9%, and Cave-ins fell to 4%.

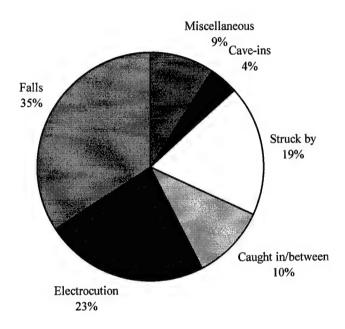


Figure 4.2 Construction Fatalities and Related Injuries, 1995

The total results for 1994-1995 in Figure 4.3 can be compared to the OSHA findings from 1985-1989 as shown in Figure 4.4. The percentage of accidents attributable to the event type "Falls" is slightly higher in this study when compared to the 1985-1989 analysis (34% vs 33%) as is "Electrocutions" (20% vs 17%). The event types Struck by, Caught in/between, and Other are lower (18% vs 20%, and 10% vs 20%, 1% vs 10%, respectively). These reductions can be assumed to be the result of using the new coding system. By expanding the primary event types from six to nineteen, the actual causation can be more accurately pinpointed. As a result, the new categories removed some of the accidents from the Struck by, Caught in/between, and Other categories and placed them in one of the Miscellaneous or Cave-in categories.

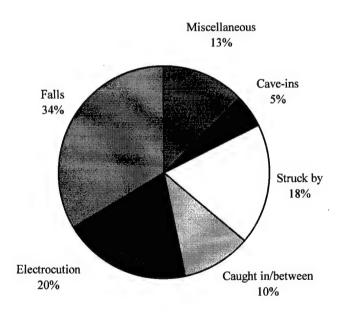


Figure 4.3 Total Construction Fatalities and Related Injuries, 1994-1995

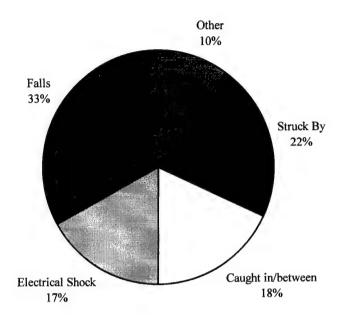


Figure 4.4 Construction Fatalities Investigated by OSHA 1985-1989 (From "Analysis of construction fatalities- the OSHA database 1985-1989", (U.S. Department 1990))

Each primary event type will be analyzed further in the following subsections.

4.3.2 ELECTROCUTIONS

In 1994, 18% of the fatalities were attributable to electrocutions. In 1995, this number increased to 23%. The total percentage for both 1994 and 1995 was 20%, which is slightly higher than the figures obtained from the 1985-1989 OSHA statistics. Figure 4.6 depicts the percentage of electrocutions attributable to each of the specific event types.

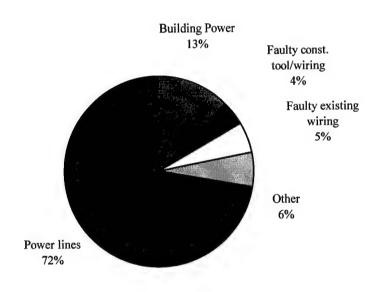


Figure 4.6 Electrocution Fatalities and Related Injuries, 1994-1995

Power line accidents accounted for the majority of the fatalities at 72%, followed by building power-related accidents at 13%. The category "Other" contained incidents which were obviously electrocutions but did not fall into any of the four specific areas, e.g. an electrician was working on an energized transformer and was electrocuted. This incident does not fall under power lines, building power, faulty existing wiring, or faulty construction tools/wiring, but is an electrocution. Therefore, it is classified as an

Electrocution-Other. Faulty existing wiring accounted for 5% and Faulty construction tools/wiring contained the remainder of the electrocutions at 4%.

4.3.3 STRUCK BY

Struck by was the third most prevalent event type. In 1994, 18% of the fatalities and related injuries were attributed to struck by accidents. This percentage increased slightly in 1995, to 19%. The total for both 1994 and 1995 was 18%. This figure is 3% lower than the statistics gathered by OSHA from 1985-1989. The new coding system is probably responsible for this change as the addition of the categories "cave-ins" and "explosion/fire" splits the data out into more specific categories. Figure 4.7 shows the results of the subcategories of the Struck by event type:

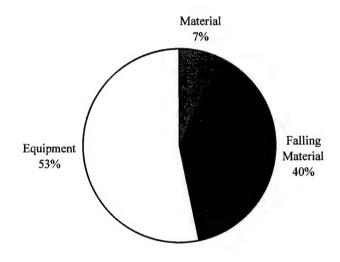


Figure 4.7 Struck by Fatalities and Related Injuries, 1994-1995

The majority (53%) of the accidents fall under the Struck by Equipment category, followed by Struck by Falling Material at 40%. Struck by Material contains the smallest percentage of incidents at 7%. A good example of Struck by Material is when a plug inserted into a pressurized pipe fails and strikes a worker. This subcategory of the Struck by event type is the one most subject to controversy. It is often difficult with some

abstracts to determine whether an accident was a Struck by Material or a Caught in/between Material.

4.3.4 CAUGHT IN/BETWEEN

The caught in/between event type contained 10% of the total fatalities and related injuries for 1994 and 1995. This was significantly lower than the data gathered from 1985-1989, and is most likely attributable to the new coding system which provides more specific codes to describe events which were previously categorized as Struck by, Caught in/between, and Other codes. Figure 4.8 shows the breakdown of this code.

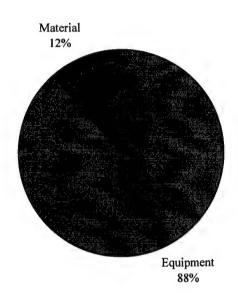


Figure 4.8 Caught in/between Fatalities and Related Injuries, 1994-1995

The vast majority of incidents fell into the Caught in/between Equipment category (88%) when compared to the Caught in/between Material subcategory (12%). As was previously mentioned, categorizing incidents into codes of Caught in/between Materials and Struck by Materials codes can be confusing. Instructions are provided in Appendix A for reference.

4.3.5 CAVE-INS

Cave-ins is a new code which is not currently used by OSHA, and therefore cannot be compared with previous data. However, 5% of all of the total fatalities and injuries for 1994-1995 can be attributed to this event type, which equates to nearly 50 fatalities each year. This fact alone is sufficient to justify the existence of the code. Figure 4.9 depicts the subcodes related to this event type.

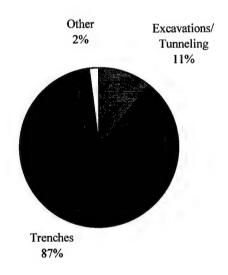


Figure 4.9 Cave-in Fatalities and Related Injuries, 1994-1995

As can be seen from the figure, most of the cave-in fatalities and injuries occurred in trenches (87%). In almost every instance, the trench was not properly supported by either sloped sides, trench boxes, or shoring. In some cases, a trench box was in place but the victim stepped out of the protected area and was caught by a cave-in.

4.3.6 MISCELLANEOUS

The code Miscellaneous is used to describe many of the event types which were previously contained under "Other" (Figures 4.10, 4.11, and 4.12).

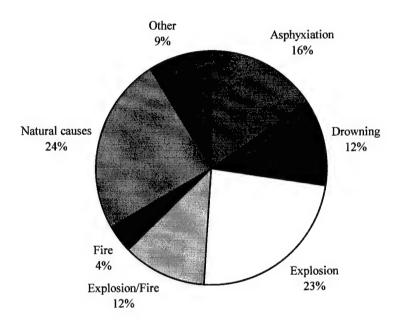


Figure 4.10 Miscellaneous Causes of Construction Fatalities and Related Injuries, 1994

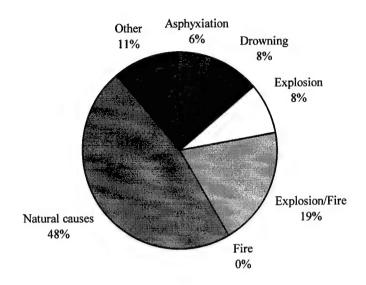


Figure 4.11 Miscellaneous Causes of Construction Fatalities and Related Injuries,

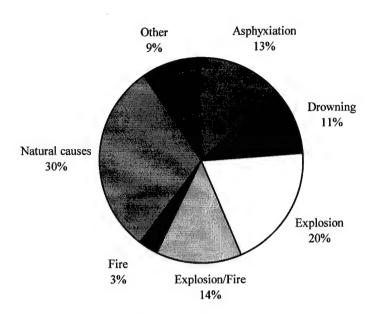


Figure 4.12 Total Miscellaneous Causes of Construction Fatalities and Related Injuries, 1994-1995

The Miscellaneous event types accounted for 13% of the total number of fatalities and related injuries for 1994 and 1995. When these numbers were broken down into their actual codes, the percentages occurring in each specific code were lower than the 5% attributed to Cave-ins. The most prevalent event type was Explosion/Fire which represented 37% of the miscellaneous causes and less than 5% (37% x 13%) of all fatalities and related injuries. It is shown as three separate event types (Explosion, Fire, and Explosion/Fire) for ease of coding but should be considered as one event type. This is followed by Natural Causes at 30%, Asphyxiation at 13%, Drowning at 11%, and finally, Other at 9% of the miscellaneous cases. In the 1985-1989 data, "Other" accounted for 10% of the total number of fatalities. The new coding system reduced this figure to 1.2% (9% x 13%) of the total number of accidents. The reduction of the

proportion of the fatalities categorized in the nondescriptive category of "Other" shows a significant improvement with the new coding system.

4.4 FINDINGS USING THE NEW CODING SYSTEM- SECONDARY FACTORS

The 1994-1995 data was evaluated using the final version of the checklist shown in Table 4.1. The checklist has two sections, the first for the primary event type, and the second to describe the events surrounding the accident. The secondary factors include such information as whether lockout/tagout was in effect, if a confined space was a factor, if PPE, shoring, or fall protection was used, the age and sex of the victim, how many people were killed or injured, the time of the accident, the occupation or work type, the SIC code of the employer, types of materials and materials handling, type of project, permanent and temporary structures, type of vehicle, large equipment, and small equipment, and a comments section if additional information is needed. Table 4.3 provides a summary of the secondary findings gathered from the database for 1994-1995. Note that in many instances, the abstract from OSHA did not contain the information required and therefore, data from that accident was not included in the results.

Table 4.3 Secondary Factors

Factor	Comments	
Lockout/Tagout	Used Properly:	3 cases (1.5% of lockout/tagout cases)
	Used Improperly:	3 cases (1.5% of lockout/tagout cases)
	Not Used:	193 cases (97% of lockout/tagout cases)
Confined Space	21 cases considere	ed confined space
Fall Height	Average: Greater	than 6 feet
Trench Depth	Average: 11.5 fee	et (42 incidents)
Age	Average: 33.4 year	ars (954 incidents)
Sex	Male:	947 cases (99%)
Time	AM:	145 cases (50%)
	PM:	144 cases (50%)
Others Involved		325 cases (34%)
Subject caused		541 cases (57%)
Equipment Type	Project:	354 cases (37%)
	Private:	21 cases (2%)
	None:	579 cases (61%)
Material Handling	Lateral:	256 cases (27%)
	Altering:	93 cases (10%)
	Hoisting:	93 cases (10%)
	None:	512 cases (54%)
Type of Project	New construction	: 250 cases (26%)
	Repair:	138 cases (14%)
	Demolition:	44 cases (5%)
	Renovation:	9 cases (.9%)
	Remodel:	2 cases (.2%)
	Unknown:	523 cases (55%)

4.4.1 LOCKOUT/TAGOUT

Lockout/Tagout refers to situations in which the equipment or electrical supply should have been secured prior to working on the system. The database contained 199 incidents which involved lockout/tagout situations. In 193 of these accidents, lockout/tagout was not used when it should have been. In three incidents, lockout/tagout was used improperly and resulted in fatalities. In three other accidents, the lockout/tagout procedure was used properly but the work still resulted in a fatality. For example, one electrician properly locked out the electrical system but was killed by built up inductive current.

4.4.2 CONFINED SPACE

Confined spaces are loosely defined as those spaces which have or could have deficient oxygen content, and also those spaces with limited ingress and egress. In this study, trenches and other areas with limited ingress and egress were not considered confined spaces. Oxygen content was the only consideration, and it was found that 21 cases met these requirements for a confined space. Of these, ten were classified as Asphyxiations, eight were Explosion/Fires, one was a Drowning, and two were considered Others. In four incidents, confined space was not considered a factor in an Asphyxiation.

4.4.3 FALL HEIGHT AND FALL PROTECTION

The majority of falls had an elevation change of more than six feet. Only two falls occurred at the same level as they originated (falls from ground level), and 17 falls were from one to six feet. In 17 cases of Falls from Elevation, the height of the fall was not specified.

The database revealed that fall protection equipment was worn quite often; however, it appears that it failed more regularly than other PPE (15 incidents) and improper use accounted for a high percentage of accidents (24 incidents, or nearly 7% of all falls from elevation). New regulations concerning fall safety went into effect in 1995 and this might account for the common use of the fall protection systems. Due to the high percentage of failures and improper usage, employers may want to focus their attention in this area to prevent future injuries and fatalities.

4.4.4 OTHER PPE

PPE consists of fall protection systems, hardhats, steel-toed boots, breathing apparatus for confined spaces, reflective clothing, electrical rubber gloves, and others. Fall protection was discussed in the preceding paragraph. In analyzing the data from 1994-1995, five cases of Asphyxiation were attributable to the lack of PPE. PPE failed and resulted in fatalities in only one instance of Asphyxiation and one instance of Electrocution.

4.4.5 TRENCH DEPTH AND SHORING

In previous research (Bren, 1996), it was found that trench length and depth were the critical factors for cave-ins. Width was not a major factor influencing cave-in occurrences. Data in this research effort was collected on trench depth but not on length. Length has been added to the final checklist in Table 4.1 for future use. In analyzing the data from 1994-1995, the average trench depth for 42 Cave-in event types was 11.5 feet. Only one of these cave-ins was using a proper shoring system which failed. Out of the remaining 41 cases, six were either using an improperly constructed shoring system or the subject had left the protected area of the trench and was caught in a Cave-in.

4.4.6 AGE AND SEX OF THE SUBJECT

The average age for the victims in the database was 33.4 years of age. Out of the 954 fatalities in the database, only seven were women. Of these seven female fatalities, five were flaggers who were struck by either a private vehicle or a project dumptruck. In the remaining two cases, one involved an equipment operator in a rollover accident (Caught in/between Equipment) and the other involved the wife of a contractor who was helping stage electrical switchgear in his absence and was Caught in/between Material.

4.4.7 TIME OF THE ACCIDENT

An analysis of the database showed that only 285 incidents contained the time of the accident in the abstract. Figure 4.13 shows the distribution of fatalities at various times throughout the day. The highest number of injuries and fatalities occurred between the hours of 11:00 AM and 12:00 PM.

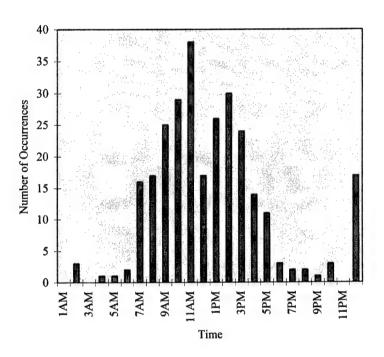


Figure 4.13 Time Distribution of Fatalities and Related Injuries

4.4.8 OTHERS INVOLVED

"Others involved" refers to those incidents where another person was involved in the events surrounding the fatality. Others were involved in 34% of the accidents included in the database.

4.4.9 CAUSED BY THE SUBJECT

In 57% of the fatalities in the database, the subject "caused" the accident. This factor was not intended to focus the blame for the accident on the individual but rather classify whether others caused the accident.

4.4.10 EQUIPMENT TYPE

An analysis of the equipment types shows that 94% of the accidents involving equipment were project related. The accidents which involved private vehicles were typically highway construction/repair projects.

4.4.11 MATERIAL HANDLING

Three types of material handling were entered into the database (lateral, hoisting, and altering). Lateral movement (58%) was responsible for the majority of the incidents involving material handling.

4.4.12 TYPE OF PROJECT

The type of project was known in 443 incidents. Of these, 56% were new construction projects. Repair projects followed with 31% of these cases.

4.4.13 ANALYSIS OF WORK TYPE AND EVENT TYPE

The database was sorted on work type and event type to determine which cause codes each trade was susceptible to in the construction industry. The major work types were carpenters, concrete workers, crane maintenance, welders/cutters, spotters (lifting operations), drywall installers, electricians, elevator repairers, equipment mechanics, equipment operators, flaggers, HVAC mechanics, masons, sheet metal workers, painters, plumber/pipefitters, roofers, and steel workers. It was often difficult and sometimes impossible to determine what the subject's occupation was at the time of death or injury and those cases were not included. Table 4.3 shows the breakdown of work type compared to event type.

Table 4.4 Analysis of Major Event Types for Large Occupation Types

Work Type	Event Type	(% of total)	Total # of Incidents
Carpenter	Fall from Elevation	(67.4)	46
	Struck by Falling Material	(17.4)	
Concrete worker	Struck by Equipment	(27.3)	11
	Struck by Falling Material	(18.2)	
	Fall from Elevation	(18.2)	
Crane Maintenance	Caught in/between Equipmen	t (100)	7
Welder/Cutter	Fall from Elevation	(32.1)	28
	Explosion/Fire	(25)	
	Natural Causes	(10.7)	
Spotter	Electrocution (power lines)	(48.6)	35
	Struck by Falling Material	(17.1)	
	Struck by Equipment	(11.4)	
Drywall Installer	Fall from Elevation	(76.9)	13
	Natural Causes	(15.4)	
Electrician	Electrocution	(63)	106
	Power lines	(40)	
	Building power	(13)	
	Other	(7)	
	Fall from Elevation	(26.4)	
Elevator Repairer	Fall from Elevation	(33)	12
	Struck by Falling Material	(33)	
Equipment	Caught in/between Equipmen	t (82)	17
Mechanic	Struck by Equipment	(11.7)	
Equipment Operator	Caught in/between Equipmen	t (50.5)	101
	Electrocution (power lines)	(9.9)	
	Struck by Equipment	(8.9)	

Table 4.4 Analysis of Major Event Types for Large Occupation Types (Continued)

Work Type	Event Type	(% of total)	Total # of Incidents
Flagger	Struck by Equipment	(100)	14
HVAC Mechanic	Electrocution (building power	r) (33)	12
	Fall from Elevation	(33)	
Mason	Fall from Elevation	(76.5)	17
Sheet Metal Worker	Fall from Elevation	(58.3)	12
	Electrocution (power lines)	(16.7)	
Painter	Fall from Elevation	(50)	20
	Electrocution (power lines)	(25)	
Plumber/Pipefitter	Cave-in (trench)	(50)	52
	Electrocution (faulty exist win	ring) (9.6)	
	Fall from Elevation	(7.7)	
Roofer	Fall from Elevation	(82.4)	74
	Electrocution (power lines)	(10.8)	
Steel Worker	Fall from Elevation	(74.4)	39
	Struck by Falling Material	(12.8)	

An analysis of Table 4.3 shows that the event type Falls from Elevation was the predominant cause of fatalities and injuries for carpenters (67.4%), welders/cutters (32.1%), drywall installers (76.9%), elevator repairers (33%), HVAC mechanics (33%), masons (76.5%), sheet metal workers (58.3%), painters (50%), roofers (82.4%), and steel workers (74.4%). The occupational types of carpenter, drywall installer, mason, sheet metal worker, painter, and roofer should pay particularly close attention to these statistics since they account for at least half of all fatalities and injuries in their fields.

The second leading cause of injuries and fatalities was Electrocutions. This event type accounted for 48.6% of the incidents involving spotters, 63% of the cases involving electricians, and 33% of the HVAC mechanic incidents. Of those cases involving electricians, the majority (40%) were due to power line contacts.

The event type "Struck by" accounted for the third highest percentage of incidents. Struck by Equipment was the leading cause of fatalities and injuries amongst concrete workers (27.3%) and flaggers (100%). Struck by Falling Material was responsible for 33% of the fatalities and injuries in the elevator repair occupation.

Caught in/between Equipment was the leading cause of injury and death amongst equipment mechanics (82%), equipment operators (50.5%), and crane maintenance workers (100%).

The final event type was Cave-ins. This event type accounted for 50% of the incidents involving plumbers and pipefitters.

The information contained in this section allows safety professionals and managers to focus their safety efforts on the primary causes of fatalities for certain trades in the construction industry.

4.5 AUDIT OF THE NEW CODING SYSTEM

Sixty total cases were given to two test participants to determine whether the results of the new coding system could be duplicated by others. Ideally, there should be considerable consistency between the coding allocations being made by different individuals. The participants coded their cases and these results were compared to the data collected and coded for this study. Collectively, 92% of the codings were the same. The differing codings primarily represented ambiguity between the Struck by and Caught in/between cause codes, which was expected since it is often difficult to distinguish between the two categories. When the ambiguity was noted, the instructions for the checklist were further clarified. For example, a speed of 5 miles per hour or higher was a descriptor that was added to define a Struck by Equipment event type; however, a rollover accident (regardless of speed) was nearly always a Caught in/between Equipment event type. Additionally, the definition for "Fall from Ground Level" (falling into a hole, etc.) was expanded due to some confusion on the part of one of the test participants.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

This study focused on the development of a new coding system to classify the primary causes of fatalities and accidents in the construction industry. While OSHA uses a system with six event types; the revised coding system has nineteen primary event types, and twenty-three secondary factors which further define the events surrounding the accident.

5.2 CONCLUSIONS

The current OSHA coding system consists of six event types, Falls, Electrical Shock, Struck by, Struck Against, Caught in/between, and Other. This research developed a revised coding system consisting of 19 primary event types. The new coding system was tested against the OSHA data from 1994-1995, and then audited by two University of Washington graduate students. Based on this analysis, it can be concluded that the new system removes the ambiguity surrounding the actual cause of injury and death by expanding the causation event types. In addition, the secondary factors in the revised coding system clarify the events surrounding the accident and provide a level of detail that is missing from the current system. As a result, the data is more usable by construction and safety professionals and allows them to focus on the actual causes of injury and death on the job site.

5.3 RECOMMENDATIONS

The following recommendations are made:

- OSHA should implement the new coding system for classifying construction industry accidents involving fatalities and serious injuries. The information gathered under the new coding system should be distributed to the construction industry to assist in reducing fatality and injury rates.
- OSHA should provide training to all accident investigators who are responsible for data entry prior to implementing the new coding system. It is important that the event types be clearly understood, especially the Struck by and Caught in/between categories, and training will ensure consistency in data entry between the investigators.
- Further research should be conducted on the secondary factors of the new cause code checklist, especially the work type and SIC codes to identify risk groups. OSHA should sort the new database by work type or SIC and provide this information on a periodic basis to the construction industry. Awareness of the primary cause of death associated with each work type or SIC should provide the information by which managers and supervisors can reduce the number of serious injuries and fatalities in the construction industry. In addition, research could be conducted on equipment statistics such as whether the equipment was moving, being worked on, or hauling at the time of the accident, and whether the equipment was operating in the forward or reverse direction.
- Care should be taken in data entry to prevent typographical or informational errors in the new database. In order for the information to be used effectively, it must be entered accurately.

• All states should be required to submit their accident data to OSHA, and it should be in the form of the new checklist. The current database is incomplete since all states do not submit their accident data to OSHA.

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APPENDIX A

Instructions for Checklist

Block 1: ID number corresponding to case number.

<u>Block 2</u>: Fill in with one of the following event types to classify what **caused** the fatality/injury accident. In some instances, the cause of the accident might not be the actual cause of death; the cause may have triggered a chain of events which lead to the fatality.

Asphyxiation

Caught in/between Equipment

Caught in/between Materials

Cave-in (trench)

Cave-in (excavation)

Drowning

Electrocution (power lines)

Electrocution (faulty existing wiring)

Electrocution (building power)

Electrocution (other)

Explosion/Fire

Fall from Elevation

Fall from Ground Level

Natural Causes

Struck by Equipment

Struck by falling material

Struck by material

Other

Electrocution (Faulty construction tools/wiring)

Description of event types:

Asphyxiation: Fatality/injury caused by some gas or toxic material that prevents normal breathing. Example: Welders entered confined space with low oxygen levels without any personal protective equipment (PPE). Breathing ceased due to lack of oxygen.

Caught in/between Equipment: Fatality/injury caused by slow moving or nonmoving equipment. Includes accidents involving moving equipment parts, or accidents involving slow moving equipment and a nonmoving object such as the ground. Example: Employee tried to climb up into a moving dozer by stepping on the tracks. Worker was pulled underneath the equipment.

Caught in/between Material: Fatality/injury caused by slow or nonmoving materials. Example: Employee was blocking a job trailer. One of the supports shifted and the trailer crushed the employee who was working underneath.

Cave-in (trench): Fatality/injury caused by a collapsing trench. A trench is a long, narrow excavation which should have sloped walls or be supported by shoring across the trench or a trench box if it exceeds 4' in depth. Example: Pipefitter was laying pipe in a ten foot deep trench without shoring or cave-in protection. Walls gave way and buried the pipefitter under five feet of soil.

Cave-in (excavation): Fatality/injury caused by a collapsing excavation. An excavation is generally wide and therefore cannot be supported across the excavation. Example: Employee was pile-driving in an excavation. The wall collapsed, pinning the worker against the pile-driver.

Drowning: Self-explanatory. Example: Equipment operator was reinforcing the berm around a lake; ground gave way and the dozer and operator sank to the bottom of the lake.

Electrocution (power lines): Fatality/injury caused by contact with either overhead or buried power lines. Also includes contact with electrical lines when working on substations and transformers. Example: Painter moved a ladder from one side of the house to the other; contacted overhead power line in the process.

Electrocution (building power): Fatality/injury caused by contact with the building power. Example: HVAC mechanic was installing duct work; drilled into floor joist to secure the ductwork and made contact with the building power.

Electrocution (faulty construction tool/wiring): Fatality/injury caused by contact with a tool with exposed wiring or faulty ground system. Example: Worker took a light into a crawl space of a house knowing that the light had a faulty cord. The cord fell into standing water and electrocuted the worker.

Electrocution (faulty existing wiring): Fatality/injury caused by contact with existing wiring which has some fault. Example: A worker was pulling ductwork in the attic and was electrocuted due to ungrounded wiring in the house.

Electrocution (other): Fatality/injury caused by electrocution but it does not fall into any of the other electrocution categories. Example: Employee was working on a malfunctioning waterheater without locking/tagging it out. Water leaked from a pipe and flooded the electric spaces, electrocuting the employee.

Explosion/Fire: Fatality/injury caused by an explosion or fire. Example: Welder cut into a tank which had not been adequately purged of confined gases. The tank exploded and started a fire.

Fall from elevation: Fatality/injury caused by a fall which involves an elevation change, usually a fall from any height above ground level. Example: Roofer misjudged the edge of the roof and fell from an elevation of twenty feet. Example: Plumber misjudged the edge of the trench and fell into the excavation.

Fall from Ground Level: Fatality/injury caused by a fall from the ground. Can also include falls that take place on some structure above the ground but the fall does not leave that elevation. Example: Plumber was working on third floor of building and tripped while walking and impaled himself on third-floor slab rebar.

Natural Causes: Fatality/injury caused by natural causes and over which the employer would generally be assumed to have no control. In some cases, the employer might have taken steps to prevent the fatality, e.g., heat stroke. In those cases where preventative measures might have been utilized, a note is made in the "Natural factor" column to indicate heat, wind, etc. In addition, a note is made in the last block to indicated what caused the death. Examples: heart attack, heat stroke, stroke, etc...

Struck by Equipment: Fatality/injury caused by equipment traveling at speeds in excess of 5 mph. Example: Flagger was struck by a semitruck while controlling traffic for a construction project.

Struck by Material: Fatality/injury caused by material moving laterally. Example: A pipe plug under pressure released from the pipe and struck the employee.

Struck by Falling Material: Fatality/injury caused by falling material. Example: Wind blew a newly-placed concrete wall over and onto a carpenter passing by.

Other: Fatality/injury which does not fall into any of the other categories. Example: Plumber died mysteriously under crawl space; no toxic materials were detected and oxygen levels were sufficient. Since cause of death is unknown, it is classified as "other".

<u>Block 3</u>: Lockout/Tagout employed: If applicable, fill this block in as "yes" if locked out and tagged out, "no" if not properly locked out/tagged out, and "NA" if not applicable.

<u>Block 4</u>: Confined Space: Fill this block in as "yes" if it was a confined space, "no" if the space was not confined, and "NA" if not applicable.

Block 5: Fall height: Fill this block in with one of the following: ground, 1-6', >6', or "NA" if not applicable.

Block 6: Trench depth and length. Fill in the actual trench depth and length. If not applicable, fill in "NA".

Block 7: Fall Protection/Shoring/PPE utilized: Fill in "yes", "no", or "NA" if not applicable.

<u>Block 8</u>: Others involved in the Accident: This is to indicate if any persons, other than the victim, were involved in the accident. Fill in "yes" or "no". The other persons could include crew members or others as long as they were directly involved with the accident.

<u>Block 9</u>: Caused by Subject: This is to indicate if the victim contributed in a major way to the cause of the accident. Fill in "yes" or "no". This question is not intended to focus blame on the individual but classify whether others caused the accident. An example of an accident caused by the victim is when a roofer misjudges the edge of the roof and falls. An example of an accident not caused by the victim is when a flagger is acting within the scope of his/her duties and is struck by a passing vehicle.

<u>Block 10</u>: Type of Large Equipment involved: This block should be filled in with the appropriate type of large equipment involved with the accident. Large equipment includes equipment which requires a driver. Examples: bulldozer, excavator, vehicle, dumptruck, scraper, crane, forklift etc..

Block 11: Vehicle or Equipment Type: Fill in "project" or "private" if large equipment or a vehicle was involved in the accident. Project equipment/vehicles include any equipment used on or for the project discussed in the abstract. A private vehicle/equipment includes equipment which was not involved in the project in the abstract.

<u>Block 12</u>: Type of Tools/Small Equipment involved: List any tool or small type of equipment involved in the accident. Small equipment does not normally involve a driver.

Block 13: Number of workers killed: This is self explanatory and should include the victim.

<u>Block 14</u>: Number of workers injured: This is self explanatory and should include all injured persons, but not those that are fatally injured.

<u>Block 15</u>: Natural Factors: Any natural event that affects the accident, e.g., lightning, wind, heat, etc.. If none are involved, state "none".

Block 16: Time of accident: The actual time should be listed in this block

Block 17: Sex of the worker. The sex of the victim(s) is listed.

Block 18: Age of the worker. The age of the victim(s) is listed.

Block 19: Type of Materials Involved: List the materials directly involved with the accident, or state "none". Examples are wood, concrete, steel, toxic materials, etc..

<u>Block 20:</u> Type of Materials Handling: If a material was listed in block 18, the type of handling should be listed in this block. The following codes should be used: hoisting (also includes lowering), lateral, or altering. If there was no materials handling, state "NA".

<u>Block 21</u>: Temporary Structures Involved: Temporary structures include ladders, scaffolds, temporary platforms, etc. List the type or state "none".

<u>Block 22</u>: Permanent Structure Involved: Permanent structures include buildings, houses, warehouses, highways/roadways, etc. The permanent structure should be the one the project is centered around.

<u>Block 23</u>: Type of Project: Types of projects include new construction, repair, remodel, and demolition.

Block 24: Work Type: This block should be filled in with the type of work the individual is doing at the time of the accident. For example, a pipefitter can be working on a vehicle which falls off its jacks and lands on him/her. The work type would then be equipment maintenance. The following are common types of work: equipment operator, equipment mechanic, spotter (crane/lifting operations), roofer, painter, electrician, plumber/pipefitter, metal worker, welder/cutter, communication worker, HVAC mechanic, sheetmetal installer, laborer, supervisor, elevator repairer, demolisher, concrete worker, mason, carpenter, asbestos worker, sider, flagger, drywall installer, or insulator. If it is unclear what the worker was doing at the time of the accident, state "unknown".

<u>Block 25</u>: Standard Industrial Classification (SIC) code: List the SIC code for the work classification. It is a four number code corresponding to the type of company employing the worker.

<u>Block 26</u>: Comments: Any comments that will clarify the situation surrounding the accident. Examples are overturning equipment, fall protection that fails, equipment with faulty backup alarms, etc.

General Rules:

If more than one report is made on a fatality or injury incident because of multiple victims, a notation should be made to cross-reference the reports to each other. This should be properly coded so that a subsequent data analysis would not count fatalities or injuries more than once.

APPENDIX B

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7	lateral	none	none	3	none	none	none	none	none	altering r	none	hoisting	9
	liquid ammonia	nitrogen	>		carbon monoxide gas		roofing asphalt	none	H2S	paint	gases	caustic chemical	acetone cyanohydrin
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\$ \$	na	па	па	na	o <u>r</u>	na	na	na	ou	na	па	e E	ļ
	Asphyxiation	Asphyxiation	Asphyxiation	Asphyxiation	Asphyxiation	Asphyxiation	Asphyxiation	Asnhwiation	Asphyxiation	Asphyxiation	Asphyxiation	Asphyxiation	

Asphyxiation	na	S,	na na		no y	yes	none	none	generator	1 0	none	unkno wn	Z	46 n	carbon monoxide n	попе	none	building	unknown	electrical	1731
Caught in/between equipment	na	na	na na		00	ou	dumptru ck	project	none	1 0	none	unkno	∑ 4	46	none	none	none	unknown	unknown	equipment operator	1771
Caught in/between equipment	na	na	na na	- 1	no	8	dozer	project	none	-0	none	unkno wn	Σ	21 n	none	none	none	unknown	unknown	equipment operator	1629
Caught in/between equipment	na	na	папа	:	no y		front loader	project 1	none	0	попе	2 :	Σ	17 re	oncre	ateral	none	unknown	unknown		1771
Caught in/between equipment	na	Da	na na	3	8	g	excavat	project 1	none	0	none	1:50 PM	Z	57 d	dirt	lateral	none	retention pond	repair	Ħ	1629
Caught in/between equipment	na	na	папа		2	g	crane	project boom	шоос	1	none	8:00 PM	∑ S	57 st	steel beams	altering none	none	unknown	new construction	crane operations	1629
Caught in/between equipment	na	na	na na				ند	project 1	none	1	none	unkno	∑ 	8 7	barges	lateral	ng to	none	repair		1629
Caught in/between equipment	na	na	na	n y	:		semitrac tor/trail er		none	-0	none	unkmo				none	попе	none	ипклоwп	equipment mechanic	1629
Caught in/between equipment	na	na	na	na	o S		grader	project	none	0	none	unkno wn	Z	67 m			none	road drainage ditch	repair	equipment operator	1629
Caught in/between equipment	na	Pa Da	na na		o			project	none	-0	none	unkno wn	Σ	************	none	none	none	logging road	unknown	equipment operator	1629
Caught in/between equipment	na	na	en E	na	yes		backhoe project		none	0	none	unkno	Σ	33			ailer	none	unknown	: O +0	1711
Caught in/between equipment	na	na	na na		n Acs	o	rig; water truck	project	none	- 0	none	umkno	≥	25 n	none	none	none	unknown	unknown	driller	1781
Caught in/between equipment	na	na	na na		ou	S	crane		попе	1	none	unkno wn	3	61 b	rtubes	gu		none	икломп	ent or	1711
Caught in/between equipment	na	na	na na na no yes	<u>п</u>	2		backhoe; project none	project	none	1 0	none	11:25 AM M 43	Z		none	none		unknown	unknown	42	1771

Caught in/between	eu.	80	na	g	Ves	ou	crane; pickup	project	none	o	none	unkno wn	ΣΣ	20	none	none	none	unknown	unknown	equipment mechanic	1794
Caught in/between	na	па		na	or or	yes			none	0		unkno wn	Σ	55	none	none	none	unknown	unknown		1795
Caught in/between equipment	na	na	na Bu	na	ou	ou	excavat		none 1	o	попс	unkno	۶	4		none	ation	bridge	demolition	equipment operator	1795
Caught in/between equipment	Da	na	na	na	ou	yes			hammer 1	0.	none	11:25 AM	Σ	30	none	none	none	unknown	unknown	#	1794
Caught in/between equipment	na	na			2	yes	front end loader	project	binders/chain s	0	none	1:30 PM	Σ	4		hoisting none	none	none	unknown		1794
Caught in/between equipment	ou	na	g	na	a .	yes	dozer	project	levering pipe 1	0	none	unkno wn	Σ	35	none	none	none	none	unknown	equipment operator	1542
Caught in/between equipment	na	na	4	па	ou ou	01	crawler	project	none	0	none	7:30 AM	Σ	5	soil	none	trench	none	unkmown	equipment operator	1794
Caught in/between equipment	na	na	na	g	ou	yes	bobcat loader	project	none	0	none	5:00 PM	Σ	30	soil	hoisting none	none	house	new construction	equipment operator	1794
Caught in/between	na	na	13	na	<u></u>	yes	loader	project	none 1	0	none	8:30 AM	Σ	4	wous	lateral	none	parking area	snow removal	equipment operator	1542
Caught in/between	ou	<u>s</u>	па	EC.	4	yes	backhoe	project	none	0 -	none	unkno wn	Σ	\$	swing cam bolt	altering none	none	unknown	unknown	equipment mechanic/op erator	1629
Caught in/between	па	па	E E	na	ou	yes	trailer	project	ramp 1	1 0	none		Σ°	57	попе	none	none	unknown	илклоwп	truck driver- equipment operator	1794
Caught in/between	<u> </u>	па	na	na	01	yes	dump	project	none	0	none	unkno	≥	72	none	none	none	none	unknown	equipment operator	177
Caught in/between equipment	na			ru u	9	9	ck; front end loader		tow chain	1	попе	8:45 AM	Z	19	none	none	none	unknown	unknown	unknown- hooking tow chain	1794
etween	na	na na na yes	па	na	yes	on	truck; dump truck	project none	none	1	0 none		unkno wn M		none	none none	none	unknown	unknown	equipment mechanic	1794

Caught in/between equipment	na	na	па	ou	ou	yes	dozer	project r	none 1	0	none	unkmo wn M	24	none	none	none	unknown	unknown	equipment operator	1794
Caught in/between equipment	na		na	na	no yes	yes	endload	project r	none 1	0	none	unkno wn M	36	none	none	none	unknown	unknown	equipment operator	1794
Caught in/between equipment	па	na	na	ou	ou	ou	dozer; trailer	project r	none	0	none	unkno wn M	51	dozer	hoisting none	none	unknown	unknown	equipment operator	1794
Caught in/between equipment	na		na	na	:	ou Ou	:	project :r	none 1	0	none	7.25 AM M	50	excavator	hoisting none		unknown	unknown	rs rt	1794
between	na		па	na	3	ou	lowboy trailer	project r	none 1	0	none	10:10 AM M	55	dolly	hoisting none	none	none	unknown	truck driver	1791
Caught in/between equipment	na	na	na	na	Yes	on O	crane	project i	pile hammer 1	0	none	unkno wn M	22	none	none	none	none	unknown	equipment mechanic	1622
Caught in/between	00			na	o <u>l</u>	. >	يب	project 1	none 1	0	none	9:15 AM M	57		none	none	unknown	unknown	equipment mechanic/op erator	1629
Caught in/between equipment	na			na	e e	: 4:	dozer, flatbed trailer	project :	none 1	0	none	unkmo wn M	£	none	none	попе	unknown	unknown	equipment operator	1794
Caught in/between equipment	na	па	E	na	2	yes	crane	project	hammer 1	0	none	unkmo wn M	37		none	none	none	unknown	e e	1623
Caught in/between equipment	na	na	na	ê.	2	ou	bulldoz er	project 1	none 1	0	none	11:00 AM M	56	none	none	trench	none	unknown	equipment operator	1623
Caught in/between equipment	па	na	na	na	yes	yes	crane boom	project	sledge hammer	0	none	1:30 PM M	19	***************************************	altering none	none	none	unknown	nce	1629
Caught in/between equipment	na	na	na	na		yes	crane	project	sledge hammer	0	none	unkno wn M	78	none	none	none	none	unknown	unknown	1623
Caught in/between equipment	па	па	na	па	on Di	yes	bobcat	project	none 1	0	none	unkno wn M	127	none	none	none	none	unknown	equipment mechanic	1629
Caught in/between na na na no yes	Ba	na	na	ru Ta	2	yes	forklift	forklift project none	none 1		none	unkno wn M	- 24	none	lateral	meat storage rack	unknown	unknown	equipment operator	1623

Caught in/between equipment	na	na	na	na	ou Ou	/cs	loader	project	forklift attachment 1	0	none	11:30 AM M	4 20	none	none	none	unknown	: 3	unknown	equipment operator	1622
octween	Ba	na	na	na	2	yes	crane	project	none 1	0	none	unkno wn M	A 28	headache ball		hoisting none	none		unknown	spotter	1622
Caught in/between equipment	Da	na	na	na	2	yes.	tractor	project	none 1	0	none	8:05 AM M	A 56	earth	lateral	al none	roadway	3	repair	equipment operator	1611
between		na	na na		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	yes	trailer	project	jacks 1	<u> </u>	none	unkno wn M	7 36	none	none	none	none		unknown	бć	1623
between		na	na		Q.	/es			none 1	0	none	2		**************************************	none	forklift to lift p/up off ground	to off			nent nic	1711
oetween	па	na	na r	na	yes	S	forklift	project	none 1	0	none	unkano wn M			none		mountain road	. s	ınknown	equipment operator- mason	1741
uəç	na	na	na	an L	***********		hopper for conveyo	project	skiploader 1	0	попе	4:50 PM N	M 36		euou		충	<u>р</u> р	new construction	inspector/test er/grader	1623
between	na	na	na		•		e speed swing (crane?) project	project	none 1		none	unkno wn M	A 64		none		none		unknown		1629
Caught in/between equipment	na	па	r Ed	na		yes	high lift loader	project	none 1	0	none	unkno wn M	A 27	none	lateral	al none	none		unknown	Equipment operator	1521
Caught in/between equipment	na	na	na r	na			3		none 1	0	none	unkno wn M			none	none	roadway		unknown	unknown (SIC 1731- electrical)	1731
Caught in/between equipment	na	na	na		음	yes	backhoe project	project	none 1	0.	none	unkno wn N	M 37	none	none		road		new construction	telephone installers- 1731	1731
Caught in/between equipment	na	na	na na		ýs	ou	trencher project	project	none	1	none	unkno wn N	Z9 W	none	none	none		ion	new construction	SIC 1731- electrical	1731
Caught in/between equipment	na			3	"		forklift	project	none	0	none	- 1	M 43	people		working hoisting platform	ng rm building		unknown	equipment operator	1743
oetween	na	na na no no	па	ou ou		yes	loader	project none	none	0 0	none	unkno wn M	M 57	7 none	none	none	driveway		new construction	equipment operator	1794

Caught in/between equipment	na	na	na	na	Ou	yes	lowboy trailer	r Project	ramps in raised position	0	none	AM	Z	30 no	none	none	none	unknown	unknown	equipment operator	1611
Caught in/between equipment	na	na	na	na	Q.	yes	backhoe project		boom/outrigg er	0	none	unkno wn	Z	27 no	none	none	попе	none	unknown	equipment operator	1611
Caught in/between equipment	na	na	na	na	9	yes	dump truck	project r	none 1	0	none	unkno wn	Σ	26 11	hydraulic fluid a	altering none	none	none	repair	equipment operator	1771
Caught in/between equipment	no	na	na	na	no yes		elevator project		none	0	none	8:30 AM	Z	55 nc	none	none	none	building	repair		1796
Caught in/between equipment	na	na	na	na	yes	Ou	fuel/ser vice vehicle	project :r	none	0	none	unkno wn	Σ	20 nc			none	3	unknown	c it	1611
Caught in/between equipment	na	na	na	na	no yes		scraper	project r	none	0	none	2:30 PM	Z	57 68	earth	lateral	попе	roadway	new construction	equipment operator	1611
Caught in/between equipment	na	na	na	na	χ	ou	hi-lo, truck	project :r	none 1	0	none	umkno wn	Z	2 I			none	unknown	unknown		1761
Caught in/between equipment	na	na	na	na	ou		none	none 1	riding lawnmower	0	none	12:30 PM	Σ 4		none	none	none	grounds	unknown	grounds maintenance	1629
Caught In/between equipment	na	na	na	na	yes	ou	Flat bed truck	J project r	none 1	0	none	0	Z	51 he	hay	lateral	none	road	unknown	laborer	1623
Caught in/between equipment	na	na	na	na	yes		dumptru ck	project	none	0	none	unkno wn	Z	18 nc		none	none	none	unknown	equipment mechanic	1711
Caught in/between equipment	na	na	na	na	yes	no	crane; flatbed truck	project 1	boom and headache ball 1	0	none	2	Σ	2 E		none	none	none	unknown	8	1622
Caught in/between equipment	na	na	na	na	no yes		crane	project l	boom; pins	0	none	unkno wn	∑ 4	6 ñ	none	none	none	none	ипкложп		1799
Caught in/between equipment	na	па	па	na	g g	yes	crane		none 1	o	none	unkno wn		57 st	late	_	none	none	unknown		1791
Caught in/between equipment	na	na na na yes no	па	na	yes		crane project none	project r	one 1	0	0 none	8:30 AM	Σ 4	sh Pi A9		ateral	lateral timber mats unknown unknown	unkmown	unknown	+	1623

Caught in/hetween equipment	na	na	na	оц	o	yes	dump truck	project	jack	0	none	unkno wn	Σ	42 I	none	none	none	none	ипкпочп	equipment mechanic	1623
Caught in/between equipment	na	na	Па	EL .	2	ou	floating work platform	project	none	0	none	unkno wn	Z	4	none	none	none	waterline for pier	new construction	plumber/pipe fitter	171
Caught in/between equipment	na	na	na	na	g 2	yes	forklift	project	none	1	none	unkno wn	Σ	4	hot water storage tank I	hoisting none	none	none	unknown	h	171
Caught in/between equipment	na	na	na	na na	ou	ou	dumptru ck	project	none	. 0	none	2	Z	51 r	none	none	none	none	unknown	equipment mechanic	1611
Caught in/between equipment	па	na	na	na	ю	yes	none	none	overhead door	0	none	p,				none	none	gu	none	Caught under electrical o/h door	1731
Caught in/between equipment	ou	na	E II	<u>e</u>	no yes	yes	crane	project	boom connector pins	1	none	12:45 PM	∑	229	попе	none	none	unknown	demolition	crane oiler	1796
Caught in/between equipment	na	na	na	na	ou	yes	milling machine /trailer	project	none 1	1	none	2:45 AM	∑		none	none	none	none	unknown	;	1611
Caught in/between equipment	na	па	na	na	yes	ou	backhoe; project		none 1	0	rain	unkno	Z	e:		none	none	unknown	new construction		1799
Caught in/between equipment	na	na	na	na	01	yes	roller	project	none 1	0	none	6:00 PM	E	23	none	none	none	road	new construction	ŧ	1611
Caught in/between equipment	na	na	na	na	e e	yes	dozer, low boy	project	none 1	0	none	2:00 PM	Σ	4	none	none	loading ramps	none	unknown	equipment operator	1794
Caught in/between equipment	na	na	na	na	8	yes	ij.	project	none	0	none	unkno wn	Z		none	none	none	bridge	unknown	equipment operator	1611
Caught in/between equipment	e.	na	na	ла по	ou A	yes	press rolls	project	none	0	none	unkno	Z	38	none	none	none	unknown	repair	# ~	1796
Caught in/between equipment	na	na	na	na	yes	ou	trailer	project	jack stand	0	none	2 }	Z	22		none	temporary support for trailer	none	unknown	- 8	1799
Caught in/between equipment	na	na na no yes	na	па	2	yes	utility trailer	project	jack and cinder block	0	none	unkno wn M	Z	22	none	none	none	unknown	unknown	mechanic	1799

			ļ	ļ			roller		\$	ļ											
Caught in/between equipment	eu	na	na	па	OG	yes	compact	project	none 1	0	none	wn	Σ	92	none	none	none	unknown	unknown	equipment	1611
Caught in/between equipment	na	na	na	na	ou	yes	compact	project	none	0	none	unkno wn	Z	99	none	none	none	highway	new construction	equipment operator	1611
Caught in/between equipment	na	na	na En		yes		dumptru ck, dozer project	(none	0		4:00 AM		************		lateral	none	none	илкпомп	equipment operator	1611
Caught in/between equipment	na	Da Da	na	na	Đ <u>i</u>	yes	compact or/traile r	project	none 1	0	none	unkmo wn	Z	31	none	lateral	none	none	unknown	equipment operator	1611
Caught in/between equipment	na	па	na	υa	2	······	loader	project	none 1	0	none	unkno	Σ	30		none	none	house	new construction	equipment operator	1521
Caught in/between equipment	na	па	ВП	g L	e	yes	dozer/tr ailer	project	none	0	none	unkno wn	Z	21	none	none	none	none	unknown	equipment operator	1611
Caught in/between equipment	na	na	na L	n a	<u>e</u>	5	crane	project	boom 1	0	none	unkno wn	Z	2	none	none	none	none	unknown	crane operator	1611
Caught in/between equipment	na	na	na	na	yas	yes	0.4	project	none 1		none	3:00 PM	≥:	4		hoisting none	none	unknown	unknown		1796
Caught in/between equipment	na	pu Da	 13	na	9	yes	dumptru	project	board 1	0.	none	2:30 PM	Σ	5	concrete	lateral	none	none	unkmown	Manual Matl Handling	1521
Caught in/between equipment	na	na	na	na	9	yes	roller compact or		none 1	0	none	unkno wn	Z	46	unknown	none	none	ипкломп	unknown	equipment operator	1611
Caught in/between equipment	na	na	12	па	e e	yes	skid steer loader	project	none 1	0	none	unkno wn	Σ	31	trash	lateral	none	unknown	unknown	equipment operator	1799
Caught in/between equipment	na	na	na na	na na	og .	, , , , , , , , , , , , , , , , , , ,	dozer/tr ailer	project	none	0	none	umkno	Z	27	none	none	none	none	unknown	equipment operator	1611
Caught in/between equipment	Па	Ba	na	na	no		tractor	project	battery cables 1		none	unkno wn	×	8		none	none	none	unknown	equipment operator	1611
Caught in/between equipment no na	011	na	na	па	na na yes	ou	personn el/mater ial hoist	personn el/mater ial hoist project none	none 1	0	none	unkno wn M 52	Σ		oil	altering none	none	umknown	unknown	# #	1799

Caught in/between equipment	ou	g Lis	na	na	ou	yes	elevator project		none 1	0	none	unkno	Z	30	none	none	none	building	repair	elevator repairer	1796
octween	na	na	ра	na	ou no	ou	none	none	none	0	none	umkno	>	37	concrete, forms	none	trench/form work	none	new construction	concrete worker	1623
between	na	na		na	yes	ou	9	project 1	pipes 1	0	none	unkno	Z		- × ^	lateral	platform	building	demolition	demolisher	1796
ın/between	па	na	na na	па	yes	ou	backhoe project		chain slings	0	none	9:20 AM	Σ	56	pipe	hoisting	hoisting excavation	pipe system	unknown	guiding lifting operations	1794
n/between	na	na	na	na	ou	yes	none		come-along	0	none		Σ	39	none	none		ипктоwп	unknown	ć~	1622
n/between	na	na	na	na	yes	ou	crane	project	crowbars		попе	unkno wn	Μ̈́	47,18	MM 47,18 concrete	lowerin g/hoisti ng	none	unknown	new construction	unknown- laborers?	171
n/between	na	na	na	ဝူ	по	ou	E		none	1	none		_ ≥	4		none	none	concrete	unknown	spotter	1629
n/between	na	na	na	na	yes	ou	truck	project	trailer	- 0	none	unkno	Σ	16	steel I-beam lateral	lateral	none	house	Moving	unknown	1799
in/between	na	na	na	na na	yes	no no	forklift	project	none	1 0	none	unkno wn	ഥ	2	electrical switchgear	hoisting none		none	unknown	guiding forklift operator	1795
Caught in/between material	na	na	n a	па	ž	yes	none	none	jac ks	1 0	none	9:15 AM	Z	51	wheel axles lateral	lateral	Jacks	mobile home	new construction	construction trades	1799
Caught in/between material	na	na	na	na na	8	yes	none	none	torch	1 0			Z	S	metal	altering none	none	water tower	demolition	cutter	1795
Caught in/between material	na	na	na	na	ou Ou	yes	none	none	none	1	none	unkno wn	<u>Z</u>	9	boiler	none	none	building	unknown	boiler installer	1711
Caught in/between material	na	na		na	9	ou	none	none	jacks/support blocks	0	none		Σ	22	modular home	hoisting none		modular home	new construction	placing home in new location	1799
on/tunneling	na	na	ove r 18 feet no	ę.	o	yes	backhoe	backhoe project none	none	0.	none	unkno wn	∑	39	į	none	excavation	none	new construction	equipment	1629

Cave-in (excavation/tunneling)	na	na		unkno wn	по	ou	pile driver	project	none 1	0	none	1:45 PM	Σ	35	earth	none	none	none	unknown	unknown	1622
Cave-in (excavation/tunneling)	na	na	35-	no	yes	ou	tractor Ioader	project	none 2	0	none	3:50 PM	MM	44,53	dirt	lateral	excavation pit	unknown	unknown	equipment operator	1794
Cave-in (excavation/tunneling)	na	na	10' no		ou	ou	none	none	none 1	0	none	unkno wn	Σ	25	none	none	ation/t	unknown	unknown	unknown	1623
Cave-in (excavation/tunneling)	na	na	n cr Mu or m		ou	on On	none	none	none 1	0	none	unkno wn	Z	26	none	none	excavation	none	unknown	unknown	1622
3	na	na	20, 1	no	ou	ou	caisson drill	project	none 1	o	none	3:24 PM	Σ	9	soil	altering	caisson holes	none	new construction	equipment operator	1794
Cave-in (trench)	<u> </u>	na	10, r		yes	ou	none	попе	none 1	0	none	3:30 PM	Z	4	earth	none	trench	sewer line unknown	шкломп	plumber/pipe fitter	1623
	na	na	=	trench box; remov		ž,	none	none	none	0	none	8:40 AM	Σ	4		попе	trench	unknown	unknown	plumber/pipe fitter	1623
Cave-in (trench)	na	na		e e	9	ou	none	none	gas torch	0	none	6:30 AM	Z			попе	trench	steam pipe	steam pipe demolition	welder/cutter	1711
Cave-in (trench)	na	EL .	20,	0	yes	по	none	none	shovel 1	0	попе	unkno	Z	22		попе	trench	sanitary sewer system	c	pipelayer	1623
Cave-in (trench)	na	na		ou	yes	O _L	backhoe	project	none 1	0	none	1:29 PM	Z	28		lateral	trench	foundation new wall cons	truction	concrete	1771
Cave-in (trench)	na	yes	٥.	ou	0	ou	none	none	none 1	0	none	unkno wn	Σ	25	unknown	none	trench	unknown	unknown	plumber/pipe fitter	1794
	E D	na	9 fe et n	ou	g.	ou	none	none	none 1	o	none	unkno wn	ַ ≥	8	earth	none	trench	unknown	new construction	plumber/pipe fitter	1623
	na	na	unk no wn no	од	o D	ou	none	none	none 1	0	none	unkno wn	Σ	25	sewer pipe	lateral		sewer line	new sewer line construction	utility construction	1629
Cave-in (trench) na na	na	na	٦	7 no no	ou	ou	none	none	none 1	0	none	A E	2 ∑	32	pvc pipe	lateral	trench	drain tile line	new construction	plumber/pipe fitter	171

Cave-in (trench)	eu	eu	10' no	ou		no none	none	none	0	none	5:30 PM	Z	26	none	none	trench	pipe system	unknown	plumber/pipe fitter	1711
Cave-in (trench)	na	па	13 feet no	1			1	none	1 0	none	11:30 AM	Σ		none	none	trench	sanitary sewer system	new construction	er/pipe	121
Cave-in (trench)	na	na	12' no	:	:			none	1 1	none	unkno		M,M 52,21	ibe	lateral	trench	unknown	unknown	pipelayer	1711
Cave-in (trench)	na	па	8- 12' no	}	3		backhoe: project	at none	1 0	none	unkno wn	Z	34	none	none	trench	septic system	new construction	grade checker 1711	117.1
Cave-in (trench)	na	na	9.5' no		:		backhoe project	ct surveyor rod	0	none	unkno wn	Z			none	trench	storm water drain line	new construction	laborer	1794
Cave-in (trench)	na	na	11' no	}	3	to none	none	none	0	none	umkno wn	Z	38	earth	none	trench	storm sewer system	unknown	plumber/pipe fitter	1542
Cave-in (trench)	В	na	10- 11' no		·····	oo	none	none	1	none	unkno	Z	29	earth	lateral	trench	23	repair	unknown	1711
Cave-in (trench)	na	na	14' no			ou oue	none	none	2	0 none	1:30 PM	щМ	M,M 35,25	pipe, earth	lateral	trench	pipe system	unknown	plumber/pipe fitters 1623	1623
Cave-in (trench)	па	na	8 fe et no		***************		. 0	ct none	1) none	3	Σ	32	dirt	lateral	trench	s ewer system	new construction	plumber/pipe fitter	1711
Cave-in (trench)	Ē	na	5.5' no	ì			none	none	0.) none	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ΣΣ	6	pipe	lateral	trench	unknown	unknown	pipelayer	1711
Cave-in (trench)	na	па	.4 .y. q	-65	secondo de		8		-	0 none		Z	26	pipe	lateral	trench	sewer system	,	equipment operator/labo rer	1623
Cave-in (trench)	na	ou Ou	12' n	Q	yes	excavat no or	wat project	ect none		0 попе	unkno wn		M,M 54,7	pipe	none	trench	house	repair	plumber/pipe fitter	1531
Cave-in (trench)	na	na	۲ n	g	,,,,,,,,,,,,,,,,,,,,,,	no none		none	-	0 none	unkno	, Z	28	earth	none	trench	unknown	unknown	unknown	1623
Cave-in (trench) na na	na	na		10- 12' no no	*************	no none	e none	none		0 none	11:00 AM	Z		pipe	altering	altering trench	unknown	unknown	plumber/pipe fitter	pe 1623

1711	1623	J623	1623	e 1623	1623	e 1521	1794	1623	pe 1711	1794	pe 1623	pe 1623	De
unknown	laborer	plumber/pipe fitter	plumber/pipe fitter	plumber/pipe fitter	unknown	plumber/pipe fitter	equipment operator	unknown	plumber/pipe fitter	equipment operator	plumber/pipe fitter	plumber/pipe fitter	plumber/pipe
unknown	repair	unknown	new construction	truction	unknown	new construction	new construction	unknown	unknown	repair	n cw construction	new construction	
sewer system	sewer	sewer system		residential new house cons	none	pipe system	≱ ii	£	sewer system	farm pond	drainage system	sewer system	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
sewer trench	trench	trench	trench	trench	trench	trench	trench	trench	trench shield; trench	trench	trench	trench	
altering	none	lateral	lateral	lateral	none	none	none	none	lateral	lateral	none	lateral	
	none	sewer pipe	pipe	pipe	earth	none	none	earth	pipe	địt	none	pipe	
M,M 36,26 soil	8	23	9	56	M,M 29,30 earth	37	30	35	4	29	36	M,M 19,20 ,M ,	
M,M	Z	Z	Σ	Z		Z	Z	×	Σ	Z	Z	M M	
9:30 AM	unkno wn	umkmo wn	10:00 AM	unkno wn	unkmo wn	4:00 PM	AM	unkno wn	11:45 AM	umkno wn	unkno wn	7.00 PM	omkrao
none	none	none	попе	none	none	none	none	none	none	none	попе	none	
	0	0	0				0		0	0	0		
										-		2	
none	none	none	none	none	none	none	none	none	none	none	none	none	
trackhoe project	backhoe: project	none	none	none	none	none	trackhoe project	none	none	project	none	none	
trackho	backhoo	none	none	none	none	none	trackho	none	none	dozer	none	none	
ou	ou	ou	o	ю	yes	og.	ou	ou	yes	ou	91		e e e e e e e e e e e e e
yes	2	2	ou	ou	Š	on on	og C			2	100	yes	********
ou	9	91	ou	ou	unkno wn	ou Ou	e	on On	impro per 13' use	unk no wn no	og	ou	
10-	٦	5.5' no	w n uk		15,	10' no	10,	17	13,	¥ o ∰	4	10.	
gu .	na	па	na	na	na	na	na	na		na	Ba	na	
na	na	na	na	na	ng	na	na	па	na	na	na	na	*****
Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	Cave-in (trench)	

Cave-in (trench)	na	na	6.5' no	ou Ou	o <u>u</u>	none	none	shovel	0	none	3:30 PM	Σ	47	dirt	lateral	trench	storm drain system	new construction	plumber/pipe fitter	1794
			yes- impro 22' per		0 1	none	none	none	3	none	unkno	Z	78	sump pump/disch arge hose	hoisting trench	trench	pipe system	new construction	laborer	1794
Cave-in (trench)			unk no wn no	2	QI .		none	none	0	none	unkno wn	Σ	2	pipe	lateral	trench	sewer system	renovation	plumber/pipe fitter	1623
			impro 9- per 10' use	010 DI	1	none	none	none	0	none	10:30 AM	Z	54		none	trench	none	пкломп	plumber/pipe fitter?	1542
			na :na	yes		barge	project	winch	2 1	wind,h igh seas	h unkno wn	Ä, M	£24,30	unkno M,M 24,30 anchor and wn ,M ,39 chain	hoisting none	none	none	repair		1629
			na na		y S		none	none	1	none	umkno	Z	41	none	попе	none	culvert	repair	removing debris from culvert	1611
			กล กล				project	none	1	unkmo	o 11:30 AM	Z	33	nonc	попе	none	none	repair	Ę	1629
	na		na na		yes		project	none	1 0	none	9.4 M	Z	45	địrt	lateral	berm	lake	new construction		1629
						dumptru	ת project	none	0	none	3	Σ	38		lateral	berm	unknown	unknown	按	1629
	na	na	na na	<u>e</u>	o <u>e</u>	none	none	riding lawnmower	0	none	unkno wn	Σ	4	vegetation	altering	none	drainage canal	unknown	nce	1629
	na		na na	yes	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	boat	project		1 0	high seas	unkno	Σ	83	none	none	none	none	unknown	welders	1629
	na		na na					none	0	none	unkno wn	Σ	8	riprap	lateral	causeway	bridge	repair	equipment operator	1622
	na	na	na na	9	DIO C	tractor	project	pump, agitator	1	none	unkno	Z	28	none	none	none	lagoon	repair	out	1542
***************************************	na na	na L	na na			e C C	none	none	0	900			5	water	e co	non-	Puod			700

Drowning	ou	yes	na	na	ou	ou	turbines project		air line	0	none	unkno wn	Σ	72 n	none	none	none	hydroelect ric dam	unknown	diver	1799
	na	yes	na	ou	yes	yes	none	none	rubber bladders 1	0	none	7:00 AM	<u>⊼</u>		none	none	bracing	sewer drain system	new construction	laborers	1794
Drowning	na	ព្រង	na	na	o	ýs	dozer	project	none 1	0	none	4:55 PM	Z	32		lateral	ice	jetty	new construction	equipment operator	1611
:	90	na	na	ou	ou	yes	none		none	o. _	none	unkno wn	≥ 4	45 	none	none	none	transforme r	unknown	electrical	1731
cution (building	ou	na	па	00	e e	yes		none	none 1	0	none	unkno wn	Z	20 II	light fixture lateral	7	none	building	unknown	electrical	1731
Electrocution (building power)	100	na	na	ou	e	yes	none	none	drill 1	0	none	unkno wn	Z	33	sheet metal; wood	altering none		house	new construction	hvac mechanic	1711
Electrocution (building power)	ဋ	na	na	ou u	ou				drill/router attachment	0	none	unkno wn	≥	30	poom	altering none		house	new construction	hvac mechanic	1711
:	yes- impro per		па	9	a		none	none	wood 2X4	0	none	unkno	Σ	25	breakers	altering	none	building	repair	electrical	1231
Electrocution (building power)	g	na	na	ou	no	yes	none	none	wire cutters	0	попе	unkmo wn	Σ	23	none	none	none	house	repair	electrical	1731
Electrocution (building power)	o <u>n</u>	na	па	Qi.	ê.	yes	попе	none	wire stripper	0	none	unkno	Z	35 f	ballast/light fixture	altering	conveyor system; stepladder	hospital	repair	electrical	1731
Electrocution (building power)	2	na	na	ou	00	yes	none	none	none 1	1	none	unkno wn	Z	8	none	none		building	unknown	electrician	1711
Electrocution (building power)	Q.	na	na	ou	100	yes	8 ton jack	project	metal bar and plate; level		none	unkmo wn		M,M 25,32 none		none	none	house	repair	leveling crew 1799	1799
	연	па	na	ou	yes	yes			drill	2 0	none	4:20 PM	M,M 29,45		aluminum straps; wood joist	altering n	none	house	new construction	hvac mechanics	1711
Electrocution (building power) no		na		na no no	00	yes	none	none	none 1	0	none	:	M 18	:	fence post lateral scaffold	ateral		building	new construction	fence installer	1799

Electrocution (building power)	yes- impro per	па	na	8	100	yes	none	none	none	1	none	unkno wn	ΣΣ	23	cable	lateral	попе	building	repair	asbestos worker	1799
ion (building	o <u>u</u>	na	na	8	ou	yes	none	none	painting equipment	1 0	none	unkno wn	Σ	4	paint	попе	ladder	building	unknown	painter	1221
Electrocution (building power)	e e	na	na	9	9	yes	none	none		1	none	2:00P M	Σ	4	5 0	altering	none	building	new construction	Te.	1731
•	2	na	na	e e	no V	yes	none	none	none	-	none	unkno wn	Σ	32	ture	altering ladder	ladder	building	unknown	electrical	1731
Electrocution (building power)	e	na	na	on on	og .	yes	none	none	попе	1	none	ΑM	Σ	39	wireway covers	altering none	none	automobil e plant	renovation	electrical	1731
Electrocution (building power)	e e	na	na	2	2	yes	none	none	none	1 0	none	unkno wn	Σ	35	electrical circuit	altering none	none	building	renovation	carpenter	1751
tion (building	o o	na	ng	9	e B	yes	none	none	none	1	none	unkno wn	Σ ,	38	덜	altering none	none	building	repair	electrician	1542
Electrocution (building power)	ou u	na	na	ou	9	yes	none	попе	none	0	none	2:30P M	Σ	29	wire	lateral	none	building	repair	electrical	1731
	9	na	na	ou	2	yes	none	none	drill	1 0	none		Z °	43	sheet metal screws, wood	altering none	none	house	new construction	hvac mechanic	1711
Electrocution (building power)	ou	υa	na	ou	o <u>n</u>	S S	elevator	elevator project	paint brush	1 0	none	unkno wn	Σ	55	paint	altering	none	building	repair	elevator repairer	1796
on (building	9	па	na	01	2	yes	none	nonc	none	o	none		<u>°</u> Z	2	none	none	none		repair	_	1731
Electrocution (building power)	g	na	na 	QI.	on.	yes	none	none	bolt cutters	1	none	unkno wn	∑	45	wire	none	none	building	repair	asbestos worker	1799
ion (building	임	na	na	9	2	8	none	none	handtools	0	none		Z	25	none	none	none	building electrical service		=	1731
Electrocution (building power)	ou Ou	na	na	ou			none	none	side cutters	1	none		Σ	9	Overhead light feed wires	altering none	none	building	repair	electrical	1731

Electrocution (faulty const tool/wiring)	na	eu u	na na	2	ou	none	none	unknown 1	0	water	unkno wn M	32	none	none	none	building	unknown	carpenter	1742
ži	g.	na	па по	g	yes	none	none	floor sanding machine	o	and humidi unkno ty wn	unkno wn M	73	роом	altering	none	building	unknown	sanding floor	1752
Electrocution (faulty const tool/wiring)	па	na	na	S.	yes	none	none	drop light cord	0	none	12:00 PM M	<u>«</u>	none	none	none	house	new construction	hvac mechanic	1711
Electrocution (faulty const tool/wiring)	ou		na no			none	none	portable light	0	none	umkno wn M	8	none	попе	none	house	unknown	plumber/pipe fitter	1711
Electrocution (faulty const tool/wiring)	91	na	na no	ou	ou	none	none	electrical snake	o	none	unkno wn M	27	none	none	none	drain line	repair	plumber/pipe fitter	1711
Electrocution (faulty const tool/wiring)	ou	na	na no	ou	S S	none	none	l dund	0	none	unkno wn M	22	none	none	none	pool	repair	draining swimming pool	1521
	na	na	na no	ê	3	none	попе	welder 1	0	water	4:15 PM M	59	none	none	none	laundry tub	repair		1799
Electrocution (faulty const tool/wiring)	91	na	na no			scissor lift	project	nibbler	0	none	2:00 PM M	:	none	none	none	building	unknown	ian	1542
Electrocution (faulty const tool/wiring)	na	na	папо	3	3	none	none	electrical handrail	0	none	10:00 AM M	19	screws	altering		building	unknown	steel worker	1799
Electrocution (faulty existing wiring)	ou	na	na no	9	٤	none	none	none	0	none	8:30 AM M	30	none	none	none	building	unknown	plumber/pipe fitter	1711
ılty	na	na	па по	2	no	none	none	ventilation fan	0	none	unkno wn M	36	pipe	lateral	none	house	new construction	plumber/pipe fitter	1711
Electrocution (faulty existing wiring)	na L	na	na na	2	2	none	none	none	0	none	unkno wn M	4	none	none	none	house	new construction	unknown	1711
ulty	ou	ua	na no	ဋ	3	none	none	none	0	none	2		***************************************	none	formwork	vault	unknown	pres- checking work	1771
Electrocution (faulty no na na no no yes	00	na	na no	a	yes	none	none none none	none	1 0	none	unkno wn M 32	32	sheetrock	lateral	scaffold	building	new construction	carpenter	1751

Electrocution (faulty existing wiring)	na	na	na	ou	2	ou	none	none	saw 1	1	none	umkno wn	Μ 31	- 1	none	none	none	house	addition	carpenter	1542
Electrocution (faulty existing wiring)	o <u>.</u>	na	n n	ou	e e		none	none	pipe wrench	0	none	unkno wn	Σ	17 wz	line	altering none	none	building	repair	plumber/pipe fitter	1799
Electrocution (faulty existing wiring)	Q	yes	na n	ou	90	r. n	none	попе	none 1	0	none	unkno wn	M 29	······	none	none	none	building	repair	plumber/pipe fitter	1711
	on	pu	na no		8		none	none	fan 1	0	none	unkmo wn	Z <u>E</u>	31 no	none	none	none	umknown	unknown	cal	1731
Electrocution (faulty existing wiring)	o <u>u</u>	na	na	ou	ou	yes	none	none	none 1	1	none	umkmo wn	M 20		none	none	none	bank	unknown	electrical	1731
Electrocution (faulty existing wiring)	o <u>n</u>	na	na n	e e	o Q	e. e	none	none	water heater	0	none	unkno wn	M 71	***************************************	pipe	lateral	none	ponse	new construction	plumber/pipe fitter	1711
ther)	yes- impro per	na	na y		ou			•••••	ohmmeter 1	0	none	umkmo wn		**********			none	switchgear	• • • • • • • • • • • • • • • • • • • •	<u>15</u>	1731
Electrocution (other)	ou	na	n n		on On		none	none	electrical water heater	0	none	umkmo wn	Z 2		none	none	none	unknown	repair	electrical	121
Electrocution (other)	- 1	na	na n	00	yes			none	electrical test equipment	0	none	umkmo wn	Z	30 no		none	חסחפ	substation	repair	electrical	1731
Electrocution (other)	2	na	na	0	ę.		none	none	none	0	none	umkno wn	Z 3(30 II.	lightbulbs	altering	none	marquee sign	repair		1731
Electrocution (other)	ou	na	na	ou	2		none	none	none	0	none		∑	32 CO		lateral	none	transforme new r	new	electrical	1731
Electrocution (other)	on.	na	na	na		u u umknown	ž.	none	unknown	1 2	none	unkno wn	Σ .ς.	53,48 ,57 un	unknown	unknow n	unknown	power generating station	unknown	electrical	1731
Electrocution (other)	па	па	na	0	2	yes	none	none	arc welder	0	none	1:30 PM	Z	51 no	none	none	none	metal duct	metal duct unknown	welder/cutter 1711	1711
Electrocution (other)	no	no na na no no	u eu	g		unknown none		none	none	0	none	unkno	× × × × × × × × × × × × × × × × × × ×		Dipe	none	none	house	new	plumber/pipe	171

Electrocution (other)	ou	na	na	ou	ou	yes	none	none	none	0	none	unkno wn	Z	25	none	none	none	runway lighting system	unknown	electrical	1731
Electrocution (other)	ou	na	na n	ou Ou	no	yes	none	none	voltage meter 1	0	none	1:20 PM	Σ	59	none	none	none	4160 volt breaker	maint/repair	electrical	1731
Electrocution (other)	g	na	n n	ou	Q.	помп	попе	none 1	none 1	0	none	unkno wn	∑	32	ted	none		unknown	unknown	electrician	1623
Electrocution (power lines)			n n		on Oi		none	none	none 1	0	none		Σ	36	none	none	none	utility pole	unknown	***********	1731
Electrocution (power lines)				-	og		попе	none	none 1	0	none	unkno wn	Σ			none	none	high voltage system	unknown	electrician	1623
Electrocution (power lines)	2	na	na T	no	on D	yes	none	none 1	none	0	none	unkno wn	Z	24	guy wires	altering none			unknown	electrician	1623
Electrocution (power lines)	0	na	na T				none	none	none 1	0	none	unkno wn	×			none			E		1731
Electrocution (power lines)	ĝ.	na	8	na			3 5	project 1	none 1	О.	none	5:43 PM	Σ	42	telephone poles	<u> </u>		telephone new system cons	truction	utility construction	1623
Electrocution (power lines)	no	na	n L	ou	ou	yes	none	none	none 1	0	none	12:30 PM	Σ	35	wiring	lateral	none	building	unknown	electrical	1731
Electrocution (power lines)	2		na L	na	yes			project	none 1	0	none	0 :	Σ	35		lateral	none	unknown	unknown	spotter	1623
Electrocution (power lines)	o L	па	na r	na	yes	yes	none	none	none	2	none	1:00 PM	M, M	37,1,1	aluminum 37,?,? gutter pipe	scaffol hoisting ladder	scaffold, ladder	house	unknown	gutter installation	1761
Electrocution (power lines)			na				:	none	none	0	none	9:00 AM	Z	32	:	hoisting none		high voltage system	repair	electrician	1623
Electrocution (power lines)	01	na	na 1	na	Ou	yes	none	none	none 1	0	wind	unkno wn	Z	23	none	none	unknown	house	repair	roofer/sheet metal worker	1521
Electrocution (power lines)	g.	na na		unkno wn	g g	yes	none	none	none 1		none	······	⋝	8	transformer lateral	lateral	none	telephone system	repair	electrician	1623

Electrocution (power	ou.	e	na	on C	Ves	ou	crane	project	outriggers and sling chain	. 0	none	unkno	no M	43	none	none	none	unknown	unknown	guiding equipment	1799
ocution (power		E	3		3	ves	3	none	none		none	unkno	or M.	A 24,2	M,M 24,27 ladder	hoisting ladder	ladder	building	unknown	taking ladder down-roofing company	1761
Electrocution (power				5	į į	Nes Ves	:	: 44	none	2	•	unkno	or M	28,24	wood light 4 poles	hoisting none	none	none	new construction	Ę	1731
Electrocution (power lines)	9	na		na))	yes	3 :	none	none	1	3		:	24	none	none	scaffold	unknown	unknown	electrocuted and then fell 27	1741
Electrocution (power lines)	no	na		ou	o <u>n</u>	yes	none	none	none	1.00	none	unkno e wn	ñ Z		none	none	none	power poles	new construction	electrical	1731
Electrocution (power lines)	ou	na	na	on O	ž,	e.	drill rig	project	shovel	1 0) none	unkno e wn	ě	20	none	none	none	none	unknown	drillers	1799
Electrocution (power lines)	2	na	na	9	ou	yes	none	none	crescent wrench	1 0) none		unkno wn M	78	none	none	none	unknown	unknown	electrician	1623
Electrocution (power lines)	2	Eu.	na	ou	o _l	yes	none	none	none	0		P :	unkno wn M	8	none	none	none	phone	repair	telephone ktr 1731	1731
ocution (power	ou	na	na	o.	ou	yes	bucket	project	none		0 none	3	unkno wn M	38	power lines	altering none	none	power pole	repair	electrician	1623
Electrocution (power lines)	ou	na		2	no	yes	none	none	none	1	0 none	:	11:15 AM M	43	metal	lateral	scaffold	building	unknown	placing	1751
Electrocution (power lines)	e c	***********	na	o _u	ou	yes	none	none	none		0 none		unkno wn M	36	high voltage cables		altering none	unknown	unknown	electrical	1731
Electrocution (power lines)	no	na	Па	o <u>u</u>	91	ou	ed boom, hydrauli	ed boom, hydrauli project	none		0 none		7 M	27	none	none	none	power poles	repair	electrical	1731
Electrocution (power lines)	по	na	na	ou	yes	uo	forklift	project	none		1 none		. 0	M30,	tower M,M.30,28 scaffold	lateral	none	none	unknown	steadying load for forklift	1741
Electrocution (power lines)	<u>e</u>	no na no no	e c	00	2	S S	truck	nroject	project '8' steel rod		940		unkno	2	power line	hoistin	hoisting none	power line	unknown	electrical- utility KTR	1731

Electrocution (power lines)	ou	na	na	ou	00	yes	none	none	wire cutters	0	none	unkno wn	Σ	26 n	none	none	попе	house	new	electrical	1731
Electrocution (power lines)	ou	na	na	2	2	yes	none	none	none 1	0	none	unkno wn	Z	34 n	none	none	none	power lines	repair	electrical	1731
Electrocution (power lines)	ои	กล	na n	2	yes	ou	backhoe: project		none 1	0	none	2:00 PM	Z	30	rigis	lateral	none	unknown	unknown	guiding equipment	1799
Electrocution (power lines)	ou			ou	2	yes	scissor lift	project	awl 1	0	none	unkno wn	Z	***************************************	рņ	lateral	none	departmen new t store cons	n new construction	electrical	1731
ocution (power				3	9	yes	ditch witch	project	none 1	0	none	3	Σ	2		lateral	trench	unknown	umkmown	equipment operator	1623
Electrocution (power lines)	ou		na	g.	ş	પ્રેલ	none	none	none		none	unkno wn		M,M. 55,33 ladder		hoisting ladder	ladder	house	unkmown	glazier	1521
Electrocution (power ines)			na n		6	yes	bucket truck	project	none		none	unkno wn	×	4.	conductor	попе	none	power system	new construction	electrician	1623
ocution (power	ou uo		na	9	2	yes	boom bucket	project	jumper cables 1	0	none	ဥ :	ĭ	31	none	попе	none	power system	repair	electrician	1623
ocution (power			na		ž		none		none		none		×		L	hoisting ladder	ladder	unknown	unknown	roofers	1761
ocution (power					e	yes	none	none	none	0	none	umkno wn	Σ		guy wires	lateral	none	high voltage system	unknown	electrician	1623
Electrocution (power lines)	10			no	o L	yes	bucket truck	project	none	1 0	none	8:00 AM	Z	27 s	5	altering	none	utility pole system	repair	electrician	1623
ocution (power	na	na		па	yes	ou	crane	project	tag line	0	none	unkno wn	Z		concrete utility vault	hoisting none	none	unknown	unknown	spotter	1623
Electrocution (power lines)	ou	na	na	ou	ou	yes	aerial Iift	project	none	0	none	unkno wn	≥	52	none	none	none	unknown	unknown	unknown	1623
Electrocution (power lines)	o.	па	na r	na no yes	yes	91	bucket truck	project none	none	0	none	unkno	×	2	electrical	lateral	none	power	repair	electrician	1731

Electrocution (power lines)	yes	na	na no	yes	yes	manlift	project	none 1	0	none v	unkno wn M	38	ground line	none	none	high voltage system	unknown	electrician	1623
Electrocution (power lines)	ou	na	na no	Q.	yes	none	none	power washer 1	0	none	unkno wn M	31	none	none	scaffold	unknown	unknown	powerwasher 1721	1721
Electrocution (power lines)	o	na	na na	yes	ou	crane	project	digger auger 1		none	unkno wn M	78	none	none	none	none	unknown	spotter	1623
Electrocution (power lines)	OL DO	na	na no	ou	yes	none		none 1	0.	none	unkno wn M	52	aluminum siding/fascia; lateral		none	garage	new construction	roofer	1521
Electrocution (power lines)	oi Oi	na	na no	ž Š	ou	none	none		*************	none v	unkno wn M	27	power pole	50	none	utility pole system	demolition	unknown	1623
ocution (power	0	na	na no	og	88	none	none	none 1	0	noue	umkno wn M	35	none	none	none	high voltage system	unknown	electrician	1623
Electrocution (power lines)	Q.	na	na na	yes	e.		project	none 1	0	none /	9:10 AM :M	8	steel pipe	hoisting none	попе	none	unknown	laborer	1629
Electrocution (power lines)	e e	na	na no	yes S	yes	manlift	project	none 1	0	none v	unkno wn M	4		altering	none	high voltage system	гераіг	E.	1623
Electrocution (power lines)	2	na		g B	8	none	none	blasting cap and lead wires	0	none v	. 0	30		none	none	none	demolition		1629
Electrocution (power lines)	9	na	na no	yes	ou	none	none	none 1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	none	Q	32	power lines	altering	none	high voltage system	mkonskun	electrician	1623
Electrocution (power lines)	9	na	na no	yes	ou	backhoe	backhoe: project	none 1	0	none	unkno wn M	38		hoisting trench	trench	water main system	new construction	spotter	1623
Electrocution (power lines)	91	na	na no	yes	88	aerial lift		none 1	0	none	unkno wn M	31		none	none	power pole	repair	electrician	1623
Electrocution (power lines)	ou	na	na no	yes	ou	backhoe project	project	none 1		none	unkno wn M,M	M,M 35,?	pipe	hoisting none	none	none	unknown	spotter	1623
Electrocution (power lines)	01	na	na na	yes	ou	crane	project none	none 1	0	none	unkno wn M	25	communicat ion tower	hoisting none	none	none	unknown	spotter	1623

	ou	na	na	yes	yes	yes	none	none	none 1	0	none	10:00 AM	≥	38	rubber blanket	none	none	high voltage system	repair	electrician	1623
ocution (power	ou	na	na	2	2	yes	none	none	none 1	0	none	unkno	Σ	53	wires	altering	none	power poles		electrical- utility construct	1731
ıtion (power	90	па		91	yes	yes	none	попе	pvc saw 1	0	none	unkno wn	Z	37	. pg	altering	excavation/t rench	unknown	гераіг	laborer	1623
Electrocution (power lines)	o u	na	na no	о 2	Ş	yes	none	none	bolt cutters		none	umkno wn	М, М,	M,M 23,35	wire	altering	scaffold	building	uction		1741
ocution (power	9	na	na	na	yes	ОП	crane	project	crane hook	0	none	unkno wn	Z	56	none	hoisting none	none	none	new construction	spotter	1521
Electrocution (power lines)	90	na	na	na	ê.	ou	bucket	project	none 1	0	none	12:00 PM	Z	77	none	none	none	none	unknown	unknown	1623
Electrocution (power lines)	o L	na	na	g L	<u>e</u>	y es		none	none 1	0	none	1:00 PM	Σ	78	r lines	altering none	none	high voltage system		3	1623
Electrocution (power lines)	110	na	na	QI.	a	yes	none	none	none 1	0	none	unkno wn	Z	4	utility pole	lateral	none	power system	Ş	utility construction	1623
ion (power	ou	na	na	na	e B	yes	none	none	climbing belt	ဝ	none	unkno wn	Σ	8	power line	hoisting none	none	power pole	repair	electrician	1623
Electrocution (power lines)	2	па	, .	na	임	yes	dumptru ck	project	fire extinguisher 1	0	none	unkno wn	Σ	4	earth	lateral	trench	storm sewer system	new construction	equipment operator	1623
Electrocution (power lines)	e 2	na	na	92	y	yes	bucket truck	project	none	o	none	unkno wn	≥	32	none	none	none	Transform er	repair	electrician	1623
Electrocution (power lines)	no.	na	na	na no	2	yes	none	none	handline 1	0	none	9:30 AM	Σ	8	none	none	none	transmissi on tower	Ę	илктомп	1623
Electrocution (power lines)	음	na	n B	9	yes	yes	none	none	none 1	7	none	umkmo	Ä X	unkno M,M 30,37 wn ,M ,24	scaffold	lateral	scaffold	unknown	unknown	unknown- moving scaffold	1742
ocution (pow	on Di	er no na	na	2	na no yes		truck with boom	project	kelly bar	0	none		Z	2	none	none	none	utility system	unknown	п	1623

Electrocution (power lines)	9	na	na n	ou	ou Ou	yes	none	none	none 1	0	night conditi 2:00 ons AM	2:00 AM M	35	tree	hoisting none	none	residential house	repair	electrician	1623
Electrocution (power lines)	o <u>u</u>	na	na n				# ¥	project	none 1	0	none	unkno wn M	75	ductile pipe	lateral	none	unknown	unknown	spotter	1623
tion (power	ou	na	na y				none		hi line spring stick	0	попе	unkno wn M	33	none	none	none	high voltage system	unknown	ä	1623
Electrocution (power lines)	no		пап	na	no		none	none	gaffs, positioning belt 1	0	none	10:30 AM M	30	none	none	none	power pole	unknown		1623
ocution (power	ou	- 3	na	3	ž.			project	hammer, screw driver	0	none	9:15 AM M	38	bolt, guy wire	lateral	none	power system	unknown	electrician	1623
Electrocution (power lines)	હ	na	n u	ou	no yes			project	none 1	0	none	unkno wn M	37	none	none	none	telephone pole	repair	telephone repairer	1799
ocution (power	no	na	na n	o G	Š		3	project	none	0	none	unkno wn M	30	pole	hoisting none	none	none	unknown	spotter	1623
Electrocution (power lines)	DO DI	na	na	ou	ou		none	none	wire strippers 1	0	none	late AM M	30	wiring	lateral	none	building	unknown	electrical	1731
Electrocution (power lines)	ou	***************************************	na	-	yes		ladder hoist	project	none 1		none	unkno wn M.1	VI 40,2	M.M. 40.20 ladder	hoisting ladder	ladder	unknown	,		1761
ition (power	e B	na	n n	ရ	o O		none		none 1	0	none	unkno wn M	30	metal brace	lateral	none	building	new construction	roofer	1542
ocution (power					ou		롡	project	none 1	0	none	unkno wn M	23	hip	lateral	none	unknown	unknown	equipment operator	1611
Electrocution (power lines)	0	na	na	Q.	88		concrete pump truck	project	remote control box	0	none	unkno wn M	79	none	none	none	unknown	unknown	equipment operator	1771
ocution (power	01		na	- 1	3		ا بيم	project	none 1	0	none	umkno wn M	23	mobile scaffold	lateral	scaffold	building	unknown	unknown but likely a steel worker	1791
Electrocution (power lines)	yes	yes na na	na v	unkno wn	ou ou		none	none	none 1	0	none	unkno wn M	45	protective tags	lateral	scaffold	substation repair	repair	electrician	1629

Electrocution (power lines)	ou	na	na 1	na	ou	yes	none	none	none	1 0	none	unkno wn M	20	ladder	lateral	none	building	unknown	painter	1721
Electrocution (power lines)	ou.	na	Ē	gu	yes	yes	none	none	none	1 0	none	unkno wn M	22	ladder	lateral	none	house	unknown	unknown- painting ktr	1721
Electrocution (power lines)	ou	na	na	ou	9	yes	попе	none	none	1	none	unkno wn M	23	ladder	lateral	none	unknown	unknown	painter	1721
Electrocution (power lines)	00				;	no	crane	project	none	1	none	unkmo wn M	45	wire cable	lateral	none	none	unknown	unknown	1761
Electrocution (power lines)	OI.	na	na	ou	yes	yes	none	none	none	-	none	6:35 PM M	20,23	3 ladder	lateral	none	building	unknown	painter	1721
Electrocution (power lines)	na	na	<u>n</u>	na	ou	yes	none	none	none	1	none	unkno wn M	31	ladder	Iateral	none	unknown	unknown	unknown	1721
Electrocution (power lines)	00	na	na 1	9	8	yes		project	none		none		46,33 M,M 6	3 none	none	none	none	unknown	equipment mechanics	1191
Electrocution (power lines)	2	na	na	na	yes	no	crane	project	none	1	none	3:30 PM M	. 22	pipe	hoisting	none	none	unknown	spotter	1542
Electrocution (power lines)	o D	па	na	na	yes	yes	crane	project	none	1	none	unkno wn M	32	traffic controls	lateral	none	highway	new construction	signalman	1611
Electrocution (power lincs)	na		na 1	on			crane	project	none	. 0	none	umkno wn M	20	beams	hoisting none	none	unknown	new construction	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1611
Electrocution (power lines)	ou				yes		≥	project	none	13	water	9 /	M,M 33,25 ,M, ,31,2 M 1		hoisting none	none	well	unknown	drillers	1799
Electrocution (power lines)	9	na	na no	:	yes	ou 0	excavat or	project	none	1	none	unkno wn M	24	none	попе	trench	none	new construction	laborer	1771
Electrocution (power lines)	on on	na	na I	ou	yes		none	none	none	2 0	none	unkno wn M.F	7 25,20	o flag pole	hoisting none	none	post office	new construction	flag pole installers	1799
Electrocution (power no no yes	ou ou	na	ng	8	90		drill rig project none	project		1 0	none	unkno wn M 31	31	none	none	попе	unknown	unknown	equipment operator- driller	1799

Electrocution (power lines)	ou .	па	na	2	y S	yes	crane	project	none	2	none	10:00 e AM	_	Æ19,2	M,M 19,27 metal roof	hoisting none	none	unknown	unknown	equip operator, unknown	1761
Electrocution (power lines)	o P	na	na	2	ž,	ou	drilling ng	project	none	0 1		unkno	Z So	72	none	none	none	unknown	unknown		1781
Electrocution (power lines)	ou	na	na	по	б	ou		none	none	0) none		∑	22	none		none	irrigation line		plumber/pipe fitter	1629
Electrocution (power lines)	o.	ng Li	па	na no) S	ou	drilling rig	project	none	-0) none	e PM	≥	70	earth	altering none	none	storm drainage system	new construction	driller	1781
Electrocution (power lines)	Q	na	na	e	no	yes		project	screwdriver	1) none	unkno e wn	Z 2	39	none	none	none	unknown		Ę	1761
Electrocution (power lines)	Q	па	r i	og e	e e	yes	overhea d crane	project	none		0 none	unkno e wn	8 Z	79	попе	none	none	unknown	unknown	painter	1791
Electrocution (power lines)	2	na	na	ပူ	S S	yes		project	none	-	none	~~~~~~	o M.N	f.16,1			none	junkyard		ent .	1629
Electrocution (power lines)	OI .	Da	na	no n	, Ves	ou .	crane	project	slings	1 2	2 none		unkno M,M 29,35 wn ,M ,31	d 29,35	spreader bar		none	modular home	new construction	guiding crane and spreader bar	1799
Electrocution (power lines)	Ou	na	па	по	Ŋ,	yes	none	none	none	2	none	unkno	o M,N	47,2	scaffold	lateral	scaffold	building	unknown	steel workers- moving scaffold	1791
Electrocution (power lines)	ou	na	na	ရူ	8	ou	boom	project	none	1) none	2:30 PM	Z	4	power poles hoisting none	hoisting	none	none	repair	electrical	1731
Electrocution (power lines)	no	па	na	og.	2	yes	none	none	none	1) none	unkno	Σ 2	33	wire rope	lateral	none	tank	II.X		1799
Electrocution (power lines)	e e	na Ula	na	ou	2	yes	none	none	none	1	none		ğ Z	37	metal	lateral	none	unknown	unknown	metal worker [176]	1761
Electrocution (power lines)	on on	na	na	임	8	yes	none	none	none	1) none	unkno	g Z	4	siding	lateral	scaffold	house	unknown	roofer	1761
Electrocution (power incs) no na na yes	ou	na	na	na	, Xe		:	project	none	-	0 none		⋝		box beam	[ateral none	none	unknown		load guider	1791

Electrocution (power lines)	no	na	na	na	yes	ou	crane	project r	none 1		none	unkno wn	Z	22,29 rail	rail	lateral	work platform	unknown	unknown	electrical KTR	1731
Electrocution (power lines)	9	na	nar	ou	ou	yes	drill rig	project r	none 1	0	none	unkno wn	Z	31	none	none	none	unknown	unknown	equipment operator	1799
ocution (power	ou		na				dozer		none 1	0	попе	unkno wn	Z	55	none	none		pump station houses	demolition	equipment operator	1795
Electrocution (power lines)	no		na r	ou	yes	ou	crane	project r	none 1	0	none	unkno wn	Z	33	poom	hoisting none	none	none	unknown	spotter	1541
Electrocution (power lines)	ou		na	ou	ya	yes	none	none	none 1		none	1:00 PM	Ж	M,M 23,22	ladder	lateral	ladder	building	unknown	unknown (roofers?)	1761
Electrocution (power lines)	ou	na	na	na	ou 10	yes	aerial crane	project r	none 1	0	none	5:30 PM	Z	53	none	попе	none	none	unknown	equipment operator	1761
tion (power	-		na	na	yes		3	project r	none 2		none	umkno wn		M,M 39,36	scaffold	hoisting none	none	none	unknown		1542
Electrocution (power lines)	ou		na 1	ou	o		none		none .1	0	none	1:20P	Z	35	none	none	none	unknown	unknown	electrical	1731
Electrocution (power lines)	ou Ou		na 1	ou	ou		none	none	none		none	unkno wn	Z	25	asbestos containment system	altering	scaffold	building	demolition		1795
Electrocution (power lines)	ou	na	na 1	na	ou		none	none	none	0	none	umkmo	Z	37	paint	altering	scaffold	unknown	unknown	painters	1721
Electrocution (power lines)	2	na	2	2	g.			1	unknown 1	0	none	unkno wn	Σ,	64	wire	altering none	none	overhead power system	repair	electrician	1799
Electrocution (power lines)	<u></u>	na	na	2	8	ß	none	none	none 2	0	none	12:39 PM		M,M 40,22		lateral	ladder	building	unknown	roofers	1761
Electrocution (power lines)	ို	na	na	91	ou	yes	none	none	none 1	<u></u>	none	5:15 PM	Σ	39	gutter	hoisting	none	building	unknown	sheet metal worker	1761
ocution (powe	no L	na	E E	na no no	9		aerial Iift	project none	none	0	none		Σ	39	none	none	none	unknown	unknown	se ;	1793

Electrocution (power lines)	e e	na	па	on Di	2	yes	none	none	none 1	0	wet 3:3 ground M	3:30P M	Z	73	none	none	none	advertisin g sign	repair	electrical	1731
Electrocution (power lines)	2	na	na	na	n D	yes	rock drill	project	none	0	none	unkno wn	Z	39	none	попе	none	попе	unknown	equipment operator	1542
Electrocution (power lines)	ou	na	па	2	2	yes	none	none	none 1	8	none	10:00 AM	Σ	56	fascia	lateral	none	house	new construction	roofer	1761
Electrocution (power lines)	Ou	na	па	OH.	yes	yes	none	none	none 1		none	5:40 PM	ЩХ	25,32	M,M 25,32 ladder	lateral	ladder	warehouse repair	repair	roofer	1761
Explosion	na	yes	na	na	o c	ю	none	none	none		none	unkno wn	Σ	35	grout	lateral	rubber plug	sewer line repair	repair	unknown	<u>171</u>
Explosion	EU.	<u>e</u>	n	g	2	yes	tank truck	project	hose	0	none	unkno wn	Z	8	gas propane	none	none	none	uwouxun	equipment operator	1795
Explosion	e.	yes	na	па	S S	yes	none	попе	hotwork type equipment	9	none	unkno wn	až Ž až		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	none	none	tank	unknown	welders/cutte	1711
Explosion	na	91	្ឋាន	na	Š	yes	none	none	metal grinder	 .	none	unkno wn	Ä	138,33		none	none	building	remodel	sheetmetal duct installer 1711	121
Explosion	na	unknow	13	na	yes	yes	none	попе	torch 1		none	unkno wn	ΣŽ	M,M 33,7	unknown- chemicals of some sort	none	none	chemical building	demolition	cutters	1795
Explosion	on.	on.	na	na	8	yes	dozer	project	none 1	О.	none	unkno	Z	9	river rock	lateral	none	natural gas line	repair	equipment operator	1629
Explosion	na	ou Ou	na	eu	2	yes	asphalt tanker	project	propane torch 1	0	none	unkno wn	Σ	37	asphalt	none	none	tanker truck	unknown	,	1761
Explosion	ou .	no	na	па	yes	yes	none	none	metal band saw;pipe wrench 3	:	none	unkno	Äχ	unkno M,M 20,41 wn ,M ,31		none	none	unknown	unknown	utte	1799
Explosion	na	Q.	па	113	임	S S	dozer	project	none 1		none	unkno wn	Σ	4	gas	none	none	gas line	unknown	equipment operator	17 24
Explosion		Ves	na na no	g E	2	Š	none	auou	gasoline powered		9	11:56						gasoline		,	Ş

Explosion	unkno wn	yes	na	na	yes	og	none	none	none 1	4	none	M,N unkno ,M, wn M,N	: 🔻 🔫 :		circuit breaker	altering none		undergrou nd vault	unknown	electricians	1799
Explosion	no	yes	na E	na		yes	none	лопе	cutting torch 1			2	Z 	35 h	methane or hydrogen	none		sunken ship	demo	welder/cutter /diver	1629
	na	ou	Б	na Ta	2	yes	none	none	propane heater 1	0	none	unkmo wn 1	Σ	27 p		none	none	townhouse	unknown	drywall installer	1742
Fire			п	na no	no	yes	none	none	none 1	0	none		Z		copper wire lateral	lateral	none	3 phase breaker for bldg	unknown	electrical	1731
0 0 0 0 0 0 0 0 0 0		:	na	na	yes S	ou		none	none 4						ammonia	none	none	ammonia scrubber	repair	plumber/pipe fitters	1541
		yes	na B	na	y S	yes	none	none	acetylene torch		none	unkno wn	A M 4	42,41 p	pipe	altering	altering excavation	sewage pumping plant	repair	plumber/pipe fitter	1623
			па	o <u>u</u>	8	ou	none	none	none 1	0	none		∑ 	55 m	ane gas	none		house	EX.	unknown	1771
	na	yes	na	ou.	ou	yes	none	none	propane torch: 1	0	none	unkno wn 1	≅	33 4. V	propane vapors	none	none	confined	unknown	welder/cutter 1629	1629
	na	improp er method na	na	na	ya	S .		none	welding equipment 2	o	none			0.7	ซ	none		gal steel storage tank	unknown	electrical ktr- welders	1731
	na	yes			yes	yes	none	none	acetylene torch	-	попе	12:00 PM	M.M.		chemical vapors	none	none	2000 gai tank	repair	welders/cutte	1623
Explosion/Fire	na	o e	g	na	yes	o <u>u</u>	none	none	none	m	none	0 3	≥	32,34 ,19*, p 34 ti	j i	none		house	unknown	painters	1721
	no	ou	па	na	89	yes	Dozer, Scraper	project	ripper 2	:	none	umkno wn	M,M	M,M 58,46 earth		lateral	none	natural gas line	unknown	equipment operators	1191
Fall from elevation	na	na	8	ou	ou	yes	none	none	none 1	0	rain	7.30 AM	×	35 12		lateral		building	new construction	unknown	1751
Fall from elevation na na >6 no y	na	na	5 0	og Og	g	yes	none none none	none	none 1	0	попе	unkno wn M 65	ΣΣ		none	none	scaffold	pier	new construction	supervisor 1542	1542

1	24 none none	scaffold	house unknown	roofer 1521
56 no. no. yes none none 1 0 none unkno 56 no. no. yes none none none 1 0 none nn 56 no. no. yes none none none 1 0 none ym N 56 no. no. yes none none 1 0 none ym N no. no. yes none none none 1 0 none ym N yes no yes none none 1 0 none ym N yes no yes none none 1 0 none ym N yes no yes none none no yes no no yes no no no yes no no no	47 none none	none		roofer
13 14 15 15 15 15 15 15 15	42 none none	ladder, temp platform	new unknown construction	electrical
na 56 no yes none none 1 0 none wm M na 56 no yes none none none 1 0 none PM M na 56 no yes none none none none none none yes N	none	scaffold	building unknown	roofer 1521
12:00 10 10 10 10 10 10 10	57 conduit altering	ladder	building unknown	electrical 1731
1	54 wood lateral	planks	new building construction	carpenter
na 56 no ps.45 M na 56 no yes none none none 1 0 none M M na 56 no no yes none none none 1 0 none M M na 56 no no yes none none none 1 0 none AM M na 56 no yes none none none AM M na 56 no yes none none none none none na 56 no yes none none none none none	poom	ramp	unknown :unknown	
na >6 no yes none none 1 0 none wm M na >6 no yes none none 1 0 none wm M na >6 no yes none none 1 0 none AM M na >6 no yes none none 1 0 none wm M na >6 no yes none none 1 0 none wm M	roofing 46 material lateral	none	building demolition	demolisher 1541
na >6 no no yes none none 1 0 none unkno na >6 no yes none none 1 0 none AM M na >6 no yes none none 1 0 none wn M na >6 no yes none none no mkn na >6 no yes none none no no	none	none	power pole unknown	electrician 1623
>6 no yes none none 1 0 none AM IM >6 no no yes none none n 1 0 none n M >6 no no yes none none 1 0 none n M >6 no no yes none none n M M	none		unknown unknown	unknown 1542
na >6 no no yes none none 1 0 none un M na >6 no no yes none none 1 0 none un M na >6 no no yes none no 1 0 none un M	58 none none	none	new building construction	roofer
na >6 no no yes none none 1 0 none wn M	33 none none	ladder	илклоwп илклоwп	unknown 1542
\$ T	60 none none	none	house unknown	roof work 1521
Σ	roof 30 material lateral	none	new building construction	steel worker

>6 no o yes none none	yes none	none	nou		none 1	0	none	unkno wn M	38	none	none	none	building	unknown	unknown 1542
no no no none none none	no none none	none none		ione			none	unkno wn M	94	none	none	ladder	house	new construction	painter
no no yes none none none	yes none none	none none	- 1	ione		0	none	unkno wn M	53	none	none	plank	hospital	renovation	carpenter
>6 no yes no crane project none	yes no crane project	crane project		ione	5	0	none	8:00P M M	39,37	, none	none	personnel platform	Kingdome	repair	sandblasting/ painting
ou	digger derrick no no truck project	digger derrick rruck project	project none	ione			none	unkno wn M	37	none	none		telephone system	unknown	line installation- equip
no no ino link? project none	snap no link? project	snap link? project	project none	ione		О	none	unkno wn M	39	staircase	hoisting none		building	repair	spotter
no no no none none none	no none	none none		lone			none	unkno wn M	226	none	none	platform	building	unknown	carpenter
no yes yes lift project none	scissor yes lift project i	scissor lift project		ione	0.		none	unkno wn M	:	vent pipe	lateral		unknown	unknown	tipped over from hole in floor
no no yes none none none	yes none none	none none		ione	-		none 1	8:00A M M	4	gutters	lateral	L	house	repair	roofers 1721
no no yes none none none	yes none none	none none		юпе			none	umkno wn M	4	electric cable	lateral	none	building	unknown	electrical 1731
no no yes none none none	yes none none	none none		ione			none .	8:15 AM M	53	nailbox	lateral	none	garage	new construction	roofer
no yes unknown none none none	unknown none none	none none	:	ione	n	o	unkno	7:00P M	21,28	none	none	none	tower	unknown	unknown173 1
3	yes		project none	ione	7	0	none	unkno wn M,M	M 37,36		none		building	unknown	electricians
Pall from elevation na na 1-6 no yes no truck d none	n- pickup license fruck d	n- pickup license	n- license					unkno							

1522	1731	1731	1731	1731	1731	1731	1731	1522	1522	1522	1541	1541	1521
laborer	phone installers/rep air	electrical ktr	electrical		electrical	unknown- freeclimbing structure	·····		ជ		sheet orker	roofer	Unknown
new construction	unknown	repair	demolition	unknown	new construction	new construction	,	unknown	new construction	rehab	new construction	demolition	unknown
apartment building	telephone Iine system	building	power pole	electric power pole	building	communic ations tower	unknown	building	garage	en	building		house
walkway	ladder	ladder	none	none	none	none	none	work platform	none	work platform	none		
lateral	none	lateral	hoisting none	none	none		none	none	none	none	none	altering none	none ladder
metal scaffold board	none	light fixture	pole	none	none		none	poom	poom	none	none	concrete	none
25	8	19	52	84	45	27	8	51	55	2	42	36	8
Σ	Σ	Z	Σ	Z	Z	Z	Z	Z	Z	⋝	Σ	Z	Z
unkno wn	1:15 PM	10:15 AM	9:18 AM	7:51 AM	7:30 AM	12:00 PM	2:09P M	umkno wn	umkno	unkno wn	unkno wn	1:00 PM	unkno wn M
попе	none	none	none	попе	none	none	none	none	none	none	none	none	none
0	0	0	0	0		5	0			0		0	5
			peri .	1		gend							
none	none	none	none	none	none	none	none	none	none	none	попе	saw	none
none	none	none	project	none	none	none	project	none	none	none	none	project	none
none	none	none	bucket truck	none	none	none	aerial lift bucket	none	none	none	none	mobile	none
yes	yes	yes	yes	yes	yes	ya	ou	ou .	yes	yes	yes	yes	yes
yes	2	yes	2	e	a	20	ou	2	8	8	2	<u> </u>	2
ОП	ou 110	ы	ou	yes	ou	압	ou	a	욘	Q.	91	ou	2
9,	79	Ş.	79 7	, ,	Ş X	>6' no	79	9	V	79	7	<u>%</u>	7
na	na	na	na	na	na	па	na	na	na	na	na	na	na >6' no no
na	eu.	na	na	na	na	na	na	na	na	na	na	na	na
Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation na

#	7	=	<u></u>	=	=	=	Ξ	=	12	=	=	=	
<u>2</u>	9 151	1731	1731	1531	1731	1541	154	1541	1522		1521	1521	7
roofer	elevator installation/re pair	electrical	cable tv Ktr	**************	electrical	roofers/metal workers	carpenter	metal workers	awning removal	metal worker 1541	Manual Matl Handling-no fall protect	carpenters	electrical Vtr 1731
new construction	unknown	unknown	гераіг	new construction	renovation	new construction	new construction	new construction	demolition	unknown	new construction	new construction	myordmi
building	building	unkmown	power pole	house	fuel oil tank	building	building	manufactu new	house	unknown	house	house	huilding
none	, none	electrical pole	попе	none	none	none	ladder	skylight- roof opening	ladder	platform	floor opening	hoisting scaffold	9 6 6
попе	none	none	попе	попе	попе	lateral	lateral	lateral	lateral	none	lateral	hoisting	lateral mone
roof material	none	none	none	none	none	metal	poom	roofing material	side awning	metal duct	exterior sheeting	poom	miondai
16	37	23	39	31	52	38	33		59	2		14	8
Σ	Σ		Z	Σ	⋝	Σ	Σ		Z	Σ	Σ	Σ	>
unkno wn	unkno wn	0	unkmo wn	unkno wn	unkno wn	unkno wn	unkno wn	. 0	unkno wn	0	unkno wn	umkno wn	unkmo
none	none	none	none	none	попе	none	none	none	none	none	none	none	,
0	0	0	0	0	0	0	0	0	0	0	0	0	
none 1	come- along/handwi nch	none 1	none 1	none 1	none	none	none	none	none	saw	none	none	none
none	elevator project	none	none	none	none	none	none	none	none	none	none	none	e do
none	elevator	none	none	none	none	none	none	none	none	none	none	none	none
yes	S S	ya Ya	no	yes	yes	yg.	ß	પ્રક	yes	ya	yes	yes	y S
Q.	ou	91	2	ou	ဋ	yes	9	010	ou Ou	00	g	yes	2
ou	o L	impro per use	ou 2	ou	ou uo	g	o D	9	90	9	ou	2	
.9<	, , ,	- II 1	9	, %	×	ou >e,	, , ,	>6' no	unk no wn no	>6′ по	, , ,	>6' no	
กล	па	na	na	по	na	na	na	na		na	:	na	a c
па	na			na	na	na		na		па		na	e e
Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Rall from elevation na na >6 no

00 9< 00 m m m m m m m m m m m m m m m m m m	ou uo	none	none spa	spacer buggy 1	o	none A	10:00 AM M	36	none	none	none	high voltage system	repair	electrician	1623
	<u>.</u>	}	none none	one 1	0	m m	unkno wn M	31	none	none	scaffold		unknown	supervisor	1542
	;	none	none none	1	0	none P	1:30 PM M		wood	lateral	scaffold	unknown	unknown	unknown	1721
>6' no	ļ	none	none none	1.	0	none N	9:20A M M	28	none	none	ladder	unknown	unknown		1731
ou)><			none none	_		2 rain P	2:00 PM M		paint and tools	hoisting	hoisting scaffold	building	unknown	painter/glazie r	1721
ou <i>9</i> <		manlift p	project none	 		none A	11:15 AM M	38,39	9 none	none	none	building	unknown	painter	1721
>6' no	,	none		paint brush	ŭ O	n none	unkno wn M	57	none	none	none	building	unknown	painter	1721
ou .9<	no yes	none	none none	ne 1		5 none P	5:45 PM M	25	air net/tarp	lateral	none	building	unknown	unknown	1721
>6' ma	Ş	none	none none	e		none		M,M 38,18	8 gin pole	hoisting none	none	radio tower	unknown	communicati ons workers	1623
impro per >6' use	2	unknow unknow n		none 1	0	n oue	unkno wn M		tarp shroud	hoisting	hoisting scaffold	water tower	unknown	unknown	1721
unk no wn no	no yes	none	none none	ne 1	;	none v	unkno wn M		none	none	none	building	unknown	unknown	1711
>6' no	no yes		none	none		none	unkno wn M		noue	none	none	powerplan t	unknown	hvac worker	1771
impro per >6' use	90	none	none no	попе	e	none v	unkno wn M	36	plywood	lateral	none	bridge	new construction	carpenter	1622
ou >6/	no yes	none	none	none	<u>.</u>	none /	11:30 AM M	5	roof material	lateral	roof opening	building	rehab	carpenter	1542

Fall from elevation	na	ра	,9	on O	o	ou	bucket truck	project	none	1	none	unkno wn	Z °	33	none	none	none	utility pole system	unknown	electrician	1623
Fall from elevation	na	na	7	yes	yes		none	none	come-along	0	none	9:00 AM	Σ	8	tower	hoisting none		communic ation tower	new construction	unknown	1623
Fall from elevation	na	na	γ̄	o D	e		none	none	none	0	none	unkmo	. ≥	6	concrete forms	lateral	way	bridge	new construction	carpenter	1622
Fall from elevation	na	na	9	ou 9<	a	yes	none	none	pry bar	0	none			31	none	none	none	building	repair	working on roof parapet wall	1741
Fall from elevation	na	na	1-6 feet no	ou	yes		pickup truck	#	none	0	none	unkno wn 1	Z	4	rators	lateral		condomini um complex	unknown	ing in ng tions	171
Fall from elevation	na	na	%	9	yes S	yes	flatbed truck	project	none	0	none	unkmo wn	Z ,	9	containers	lateral	none	none	unknown	securing load [171]	171
Fall from elevation	a	a	%	ou	2		none		none	0	none			33		none		0		unknown	1611
Fall from elevation	na	na	unk no wn no	e e	yes	ou	scissorli ft	project	none		none	9:00 AM	ζ	54,7	none	none	catwalk	theater	unknown	unknown	1711
Fall from elevation	na	na	%	ou	<u>e</u>	yes	none		none	0	none		Z	В	poom	lateral	wood beam	b 0	new construction	carpenter	1542
Fall from elevation	na	na	9	yes	8	yes	none	none	none	0	none	9:30 AM	Z	84	none	none		building	repair	plumber/pipe fitter	1711
Fall from elevation	ьп	na	7	2	ou	yes	none	none	hammer	1	none		∑	7	роом	none	none	building	new construction	carpenter	1542
Fall from elevation	a	na	ġ,	9, 10	Ŷ.		none	none	none	0	none		∑	9		none	ladder	house	repair		1711
Fall from elevation	na	na	w no	unk yes- no impro wn per	e e		none	none	none	0	wind	umkno wn	∑	27	poom	none	concrete forms	unknown	new construction	carpenter?	1611
Fall from elevation na na	na	na	,9 ,	>6' no no	e e	yes	none	none	none	0 1	none		Σ	2	none	unknow n	10ne	warehouse;repair	repair	roof work	1542

Fall from elevation	na	na	1-6' no	3	no	yes	none	none	none	0 -	none	unkno wn	Z	76	попе	none	step ladder	unknown	unknown	welding fire watch	1542
Fall from elevation	na	na		ou	00	yes	none	none	none 1	0	none	unkno wn	Z	25	corner plate	lateral	floating scaffold	steel bridge	new construction	ironworker	1622
Fall from elevation	na	na	7	ou	ou	yes	none	попе	none	1	none	8:37 AM	Σ	55	none	none	none	building	new construction	carpenter	1542
Fall from elevation	na	na	.9<	uo	Q		попе	none	none	0	none	2:50 PM	Z	. 15	poom	lateral	roof opening	building	unknown	metal worker 1542	1542
Fall from elevation	na	na	, %	ou Do	no	yes 1	none	none	none	0	none	10:30 AM	Σ	65	78	lateral		building	new construction	electrical	1731
Fall from elevation	na	na	, y %		on.	yes	none	none	none	0	none	unkno wn	Z	32		попе	none	building	rehab	unknown	1542
Fall from elevation	na	na	<u>,</u>	ou	ou		3	3	none	0	none	unkno wn	×					building	new construction	roofer	1542
Fall from elevation	na	na	9	ou	yes		none	none	none	0	none	unkno wn	Z	9	forms	none		crypt	new construction	carpenter	1542
Fall from elevation	na	na	01 ><		yes		}	none	none	1	10.		Z		none		ladder and platform	power generation new tower cons	new construction	structural metal worker 1542	542
Fall from elevation	na	na	9<		2			none	none 1	1 0	none	unkno wn	Z			none		communic ation tower	unknown	communicati ons worker	1623
Fall from elevation	na	na	, %	og.	no	yes	none	none	sander [none	unkm wn	Z	61	drywall	altering none		house	new construction		1521
Fall from elevation	na	па	.9<	90	<u>п</u> о	yes	none	none	none	0	none	unkno wn	Z	55	ac duct	none	scaffold	unknown	unknown	unknown	1542
	na	na	9	00	Q.	yes	elevatin g aerial platform project	project	none 1	1 0	none	11:30 AM	Z)				unknown	unknown	ŧ	1731
Fall from elevation na na	па		, %	9	>6' no yes no		aerial lift	project no	none		none	8:00 AM	ММ	8:00 AM M,M 48,41 none		none	none	auditoriu m	new construction drywaller		1542

	na	na u	. 9	g	9	yes	none	none	none 1		none	unkno	×	41	roof trusses	lateral	none	house	new construction	roofer	1521
Fall from elevation	na	na	na	na L	OI.	yes	none	попе	paint brush		none	unkno	Σ	53	paint 1	lateral	none	wharf	repair	painter	1721
Fall from elevation	<u> </u>	na	7	yes	ou	ou	none	попе	none	0	none	2:30 PM	Z	51	none	none	попе	building	unknown	laborer	1542
Fall from elevation	na	na	9,	impro per use	yes	yes	none	none	none 1	0	none	AM		22		none	핃		unknown	painters	1721
Fall from elevation	na	na	, 9	2	2	yes	none	none	trowel 1	0	none	ΑM	Z	63	grout	none	scaffold	none	new construction	mason	1542
Fall from elevation	na	na	0u /9-1	2	ou	yes	none	none	none	0	none	umkmo wn	Z	63	insulation 1	lateral	step ladder	building	unknown	insulator	1542
Fall from elevation	na	na	^	00	ou	yes	none	none	none 1	0	none		⋝	42	none	none	scaffold	building			1629
Fall from elevation	na	na	unk no wn no	n	9	yes	none	none	none 1	0	none	unkno	Σ	31	snow 1	lateral	ladder	house	repair	roof work- snow removal	1521
Fall from elevation	na	na	%	impro per use	9	yes	none	none	none	0	none	%	Z	25	none	none	none	bridge	unknown	sandblaster	1721
Fall from elevation	na	па	ou >6,	ou ou	9	yes	none	none	spray paint equipment	o.	none		Z	2	•	none		warehouse		painters	1721
Fall fro m eleva tion	na	na	79 7	yes- >6' failed	<u>e</u>	ou	none	none	none	0	none	unkmo wn	Z	4	none	none		communic ations tower	communic ations new tower construction	cati er	1623
Fall fro m elev ation	na	na	γ.	yes- not used	2	yes	aerial lift bucket	project	none	0	none		Z	32	rope	hoisting none		unknown	unknown	laborer	1623
Fall from elevation	na	na	7 9	impro per use	yes	yes	none	none	none 1	0	none	unkno wn	Z	41	s	lateral		paper mill	unknown	beams (coating KTR)	1721
Fall from elevation na na >6 no no	na	na	5	ou u	e e	yes	none	none	none	0	none	10:00 AM M		78	none	none	ladder	house	new construction	ē	1521

Fall from elevation	na	na	, 08	yes- 80' failed	по	ou	none	none	hoisting system 1	0	none	unkno wn	Σ	31	communicat ions cable/person; hoisting none	hoisting		communic ation tower	unknown	communicati ons worker	1623
Fall from elevation	na	u	^	o D	or Or	yes	none	none	none	0	none	unkno wn	Σ ૂ		none	none	none	building	unknown	unknown	1721
Fall from elevation	na	na	¥ o w w	unk no wn no		on	tugboats , barge	project	none 1	0	none	unkno wn	Σ	33	none	none			new construction		1629
Fall from elevation	na	na		impro per use	9	ou	none	none	none	0	none	unkmo	Z	36	paint	fall restrair altering system	ing	radio tower	unknown	painters	1271
Fall from elevation	na	Ba	, X	2	yes	yes	попе	none	screw gun,caulk gun 1	0	sleet	unkno	Σ	38	80	hoisting /altering ladder	ladder	townhouse	new construction	E	1761
Fall from elevation	na	na	× ×	2	ya.	yes	w/ personn el	project	none	0	none	12:00 PM	Σ	38		none	none	building	new construction	roofer	1761
Fall from elevation		na	7.	>6' no	Ş	o D	ing boom forklift	project	none		none	unkno	Z	20	none	none		unknown	unknown	steel worker	1791
Fall from elevation	na	na		ou	on on	on .	none	none	none 1	0	none	PM 9	Z	4	none	none		building	unknown	fall from roof roofing co?	1761
Fall from elevation	na	па	δ,	ou	2	yes	none	none	none	1	none	10:00 AM	Σ	8	none	попе	none	house	unknown	roofer	1761
Fall from elevation	na	na	<u>`</u> 9	임	Q.	s	none	none	none	0	none	•	Z	4		•	none	building	repair	roofing	1761
Fall from elevation	na L	ра	, , ,	ou Ou	မ	yes	none.	none	none 1	1	none	11:00 AM	Σ	4	none	none	ladder	building	unknown	roofer?	1761
Fall from elevation	na	a	γ.	91	on Ou	o _L	none	none	none	0	none	•••••••	Z	33	none	попе		building	repair	roofer	1761
Fall from elevation	na	na	δ.	on O	2	yes	none	none	none 1	1	none	unkno wn	Z	25	none	none	none	house	new construction	roofer	1761
Fall from elevation na na	na	na		ou 00 9<	<u> </u>	yes	none	none	none 1	0	none		Z	32	none	none	none	building	new construction roofer		1761

1761	carpentry (putting in window trim) 1761	ter 1751	1921	orker	orker 1791	g 1761	7) 1761		ker	1761		for ny 1761	ģ
roofer?		unananananan		Ę	n steel worker	gutter cleaning				roofer	roofer	courier for company	unknown-
unknown	unknown	new construction	unknown	: 5	renovation	repair	unknown	пкоомп	unknown	unknown	repair		
building (skylight)	house	building	building	s building	building	house	building skylight	building	building	building	building	building	
попе	scaffold	none	none	hoisting steel trusses	none	none	none	none	none	none	none	ladder	
none	none	altering none	lateral	hoisting	lateral	none	none	lateral	lateral	none	none	none	
none	none	window dormer	insulation	metal roof decking material	skylight	none	none	skylight covers	metal sheeting	none	none	none	*******
35	M,M 48,7	25	8	8	55	5 2	16	8	25	જ	89	92	
Σ 。	, M,N		Σ	Σ	Z	Σ ,	∑	∑ .	Σ	_ ∑	≥	Z.	
wn	unkno wn	unkno wn	unkno wn	unkno wn	unkno	unkno wn	unkno wn	unkno wn	unkno wn	unkno wn	unkno wn	unkno wn	unkmo
none	none	frost	none	none	none	none	none	none	none	none	none	none	
1	1	1	0	1	0	- 0	1	1 0	0	- 0	-0	1	
none	none	none	none	попе	none	none	none	none	none	none	none	none	
none	none	none	none	project	none	none	none	none	none	none	none	none	
none	none	none	none	hoisting equipm ent	none	none	none	none	none	none	none	none	
yes	ou	ou	, 36	yes	yes	yes	yes	yes	yes	ycs	ye.	yes	
e	yes	2	ou	yes	ou	20	8	yg.	2	ou	e e	e	
>6' no	2	ou .9<	ou ><	ou >9<	ou /9<	>6 no	ou >6′	ou ,9<	2	>6' no	>6' no	unk no wn no	
9<	9<	9<	, V	γ	9<	^	, jo	9	, V	, V	Ž Ž	a e E	
na	na	na	na	na	na	na L	na	u	na	na	na	na	
na	na	na	na	na	na	na	na	na	na	gu	na	na	
Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	

.er- 1761	1761	1761	1751	1771	1542	1771	ite) 1791	1751	1751	1751	1751		1721
steel worker- roofer	roofer	roofer	carpenter	•	roofer	carpenter	unknown(ste el worker?)	carpenter	unknown- carpenter?	carpenters installing a roof	carpenter	steel worker	camenter
unknown	new construction	unknown	new construction	new construction	new construction	unknown	unknown	new construction	new construction	new construction	new construction	new construction	new construction camenter
building	building	building	building	elevator shaft/build: new ing cons	building	building	unknown	building	house	barn	house	building	house
none	rain barrier over openings in	none	none	scaffold	none	stepladder	попе	попе	ladder	scaffold	none	none	
lateral	none	none	50	altering	lateral			lateral	попе	попе	altering none	lateral	altering none
corrugated roof deck	none	none	роом	concrete	metal roofing materials	none	steel grating lateral	wood	none	none	poom	insulation and metal decking	poom
45	52	21	25	47	23	85	35	35	45	M,M 36,21	21	34	18
Z	Z	Σ	Z	Σ	Σ	Σ	M	Σ	Z	M,M	Z	Z	Σ
unkno wn	5:00 PM	umkno wn	9:45 AM	umkmo	2:30 PM	1:43 PM	unkno wn	1:30 PM	umkno wn	unkmo wn	unkno wn	unkno wn	3:30 PM
none	none	none	none	none	none	none	попе	попе	none	none	none	none	none
0	0	0	0	5	0	0	0	0	0		0	0	0
none	none 1	none	leverage board	none	none 1	none	попе	prybar 1	none 1	none 1	none	none 1	none 1
none	none	none	none	project	none	none	none	none	попе	none	none	попе	none
none	none	none	none	0	попе	none	nome	none	none	none	none	none	none
yes	8	ю	no yes	00	91	9	yes	010	yes	90	no	yes	yes
2	e e	2	8	e	<u>o</u>	e	yes	2	o _l		, , , , ,	ou	<u>0</u>
>6′ no	оп >6	ou >6,	>6′ no	ou ><	ou ,9<	impro per >6' use;	>6' no	>6' no	ou ,9<	>6, по	>6' no	ou >6, no	>6 no no yes
na	na	na		na		na	na	na	na	na	na	na	
na	na	na	na	na	na	na	na	па	na	na	na	eu.	na
Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation na na

1751	791	761	791	751	751	751	16	791	751	16/	751	ē
						2				13		170
carpenter	steel worke	roofer	steel worke	carpenter installing a roof	carpenter	carpenter	unknown	steel worke	carpenter	steel worke	carpenter	putting tape on steel to adhere
new construction	new construction	repair	new construction	new construction	unknown	unknown	unknown	unknown	unknown	new construction	new construction	new construction
house	building	house	departmen t store	building			silo	ure	unknown	building		,
попе	none	toeboard	none		ladder	work platform	scaffold	none	adder	none		
none	hoisting	hoisting	none	lateral	lateral	lateral	hoisting		altering	hoisting	altering	altering none
none	bar joists	shingles	steel roof decking	felt paper	nailers and hurricane clips	cornice	scaffold	none	poom		wood	tape
35	22	36	28	94	37	28	34	24	23	37,53	19	4
Σ	"	Z	×		Z	Z	×	Z	×	ММ	Z	Σ
unkno		mkno vn	ınkno vn		ınkno		-	mkno vn	ınkno rv	ınkno vn	ınkno vn	unkno wn M 44
	***************************************	•		:		:	3				3	none
	0	0.	o	0					0	0		0
										2		p4
none	none	none	none	none	none	none	none	none	power saw	none	circular saw	none
none	project	none	none	none	none	none	none	none	none	project	3	project none
none	forklift	none	none	none	none	none	none	none	none	hoisting equipm ent	none	semítrai ler
yes	o <u>u</u>	90	no	yes	yes	yes	yes	yes	yes	yes	yes	yes
00	Š	OII.	yes	9	2	2	2	ou	on O	yes	ဥ	
9	8	92	9	g.	90	2	9	2	g	ou	g g	2
.9<	>6	, , ,	, ,	, Ø	⁵ 0,	19	%	Ϋ́	<u>-</u> -6	, ,	7	
na	na	na	na	na	na	па	па	na	na 19	па	na	па
na	na	na			and the second	na						na
					******							Fall from elevation na na >6' no no
	>6 no no yes none none 1 0 none W 35 none none house construction carpenter	na >6 no yes none none 1 0 none wn M 35 none none house construction carpenter na na >6 no yes no forklift project none AM M 22 har joists hoisting none huilding construction steel worker	na na '56 no no yes none none none 1 0 none wm M 35 none none none none carpenter na na >6 no yes no forklifi project none 1 0 none AM M 22 bar joists hoisting none building construction steel worker na na >6 no no no no none none none none none n	na 76 no yes none none 1 0 none M 35 none none	na 36 no yes none none 1 0 none wn M 35 none none horizon none none	na na<	1	1	No. No.	13	1	13

na	a na		>6' 110	9	yes	none	none	none	1	none	11:50 AM	Σ	4	poom	altering none		house	new construction	carpenter	1751
<u> </u>	···········		ou ,9<		} 	lul	project	none	1	none	unkno wn	M.	J 48,25	5 people	hoisting none		building	unknown	unknown	1751
na Da	a na		° 19∕			none	none	none	1 0	none	unkno wn	_ ∑	44	none	none	gu	building	E	carpenter	171
na			yes- impr >6' per		} <u>-</u>	none	none	none	0	none	3:57 PM	Σ	56	bolts	altering	none	building	new construction	ទី	1791
na			ou ><			none	none	none	1	none	5:15 PM	Σ		metal decking	lateral	none	building	new construction	steel worker (roofing)	1791
na	a na		ou: ,9<		yes	none	none	none	0	none	umkno	_ ∑	%	skylights	lateral	none	building	unknown	roofer	1761
levation na	a na		unk no wn no		yes	tower boom	project	some instrument to drive out pins	1) none		Σ	20	none	none		unknown	unknown	nent or	1791
			>6' no		yes	none	none	none	0) none	9:00 AM	Z	39	none	none	ladder	house	repair	roofers	1761
na			>6' по			none	none	none				Σ	4	none	none	none	building	unknown	roofer	1761
na	1a na		ou .9<	임	o yes	none	none	none	. 0) none	3:00 PM		57	none	none	temporary grated platform	warehouse	new warehouse construction	welder	1791
na			>6' no			none	none	none	1 0) none	unkno	Σ		roof tiles	lateral	none	building	unknown	roofer	1761
Fall from elevation na	1		>6 10		<i>{</i>	none	none	none	0) none	unkno	∑	23	bridge forms	lateral	none	bridge	new construction	construction trades, steel worker?	1791
Fall from elevation na			>6' no	01		none	none	none	- 0	0 none		Z	26	truss	none	none	building	new construction	connecting trusses- steel worker?	1791
Fall from elevation na		na >6 no no	0 >¢	Ĕ		none	попе	none	1 0	o none	10:00 AM	Z o	3	metal decking	lateral	曾	building	new construction	structural metal worker 1791	1791

	7	51	1	53	7	75	7	7	5	7	51	ž	7
1761	1111	1761	171	1761		1761		171	1761	1771	1761	1731	12
roofing	unknown	roofer	construction trade?	roofer	forms- carpenter or concrete	roofer	hand packer/packa ger (?)	unknown- carpenter?	sheet metal worker	concrete finisher	roofer	electrical	concrete cutting
гераіг	new construction	new construction	new construction	repair	new construction	repair	new construction	new construction	new construction	unknown	unknown	repair	morpu
building skylight	building	building	silo	building	guipfing	house	building	building	building	highway	building	sign	huilding
none	none	ventilation opening	scaffold	skylight cover	none	ladder	concrete formwork	none	ladders	none	none	none	skylight
lateral	попе	none	hoisting (loweri ng)	altering	altering	none	none	попе	altering	lateral	none	none	none
roofing material	none	none	wood forms	wood	wood	none	попе	none	rain gutters	concrete forms	none	none	none
77	33	8	23	32	21	58	4	4	34	21	31	33	8
Σ	Z	Z	Z	Z	Z	Σ	Σ	Σ	×	Σ	Σ	Σ	Σ
unkno wn	unkno wn	unkno wn	11:00 AM		unkno wn	1 0		unkno wn	unkno wn	7:30 AM	2:30 PM	unkno wn	10:15 AM
none	попе	попе	none	попе	none	none	none	none	none	none	none	none	none
0	0	0	0	0	0	0	0	0	0	0	0		0
wheel barrow 1	none	none	none	none	none	none 1	none	none 1	solder kettle, solder iron	none 1	none 1	none	none
none	none	none	none	none	none	none	попе	none	none	project	none	project	none
none	none	none	none	none	none	none	none	none	none	pickup truck	none	reach boom truck	none
yes	yes	પ્રેલ	yes	ou	SS As	o L	yes	yes	yes	ou	S	yes	·····
2	g.	20	ž	a	ou Ou	9	o D	o <u>u</u>	<u>e</u>	yes	2	2	2
- 8	ou ou	<u></u>		00			yes- impro per	no	ou		ou	ou 0	>6 no no yes
>6′ по	,9%	, %	, >6' II0		ou >e'.	1-6' no	% %	9	,9	1-6' no	, ,	,9<	
na		na		na		-		3		na			
na	na I	na	na	na			na	ru I	eu L	na		30	
5	5			5	5		<u>-</u>	<u>5</u>	E	5	······	5	£
Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation na na

				~~~~~		•••••	T P					*********			e E	:		waterproofin	
na >0 no	ē		yes	01	none	none	ејесијс	O	none	AM 9:40	Σ	4	none roof	none	scattoid	SIIO	пусломп	g the bin	
na >6' n	 >6	ou	OE .	yes	none	none	none	0	none	ΑM	Σ	28	shingles	hoisting ladder		building	unknown	roofing	1761
na >6' n	,9¢	ou	no no	yes	none	none	none	1	none	11:00 AM	Z	25	steel	lateral	none	store	new construction	steel worker	1791
9e, ua >6,	%	ខ	OI.	yes	none	none	none	1 0	none	umkmo wn	Z	4	insulation	altering none	,	building	repair	roofer	1761
eu ><	%	n	9	yes	none	none	none	0	none	0	Z	23	shingles	lateral	trash chute		repair	roofer	1761
%	%	ខ្ន	9 B	yes	none	none	none	1 0	none	wn	Z	23	none	none	roof opening covers	0:	unknown	roofer	1761
na >6	9<	no	00		none	none	none	1 0	none	unkno wn	Z	53	roofing material	lateral	notie	building	unknown	roofer	1761
na >6	9<	>6 no	9	yes	none	none	ll:up	1	none	10:22 AM	Σ.	4	none	попе	scaffold	monorail system for new dam const	new construction	steel worker	1791
na >6'	γ.	ou	ю	unknown	n none	none	none	1 0	none	9:20 AM	Σ	22	none	none	none	warehouse	new construction	roofer	1761
na >6'	9	ou	9	yes	none	none	none	1 0	none	unkno	Z	4	temporary cross braces	lateral	cross braces	clock tower	unknown	unknown	1791
na >6'	9	ou.	011	yes	none	none	none	1 0	none	unkno wn	Σ	26	siding	lateral	none	house	unknown	sider	1761
.0 P	8	2	o e	8	none	none	none		none	unkno	×	25	welding leads	lateral	none	building	new construction	steel worker- welder	1791
na >6'	X	o, no	2	, Se	none	none	none	1	none	2:30 PM	Z ,	8	metal decking	altering none		building	repair	roofing/sheet metal work	1761
na na >6 no yes no		100	yes	01	none	none	none	0 4 wind						none			new construction	steel workers 1791	1791

Fall from elevation	na	na	9^	ou	2	yes	none	none	motorized	0.		wet 7:00 surface AM	Σ	75	roof shingles	hoisting none	попе	building	new construction	roofing	1761
Fall from elevation	E II	na	,9 ×	ou	no yes		попе	none	none	1	none	unkmo wn	Σ ٍ	45	sheet metal decking	lateral	none	building	new construction	etal	1761
Fall from elevation	na	na	<u>%</u>	ou	100	yes	none	none	none	- 0	none	unkno wn	Z	38	welding lead	none	none	building	new construction	steel worker	1791
Fall from elevation		na	5∕	ou			попе	none	none	1	snow	10:45 AM	Σ	33	snow	lateral	none	building roof	repair	roof-snow removal	1761
Fall from elevation	na	na	%	ou	2	yes	none	none	none	0	none	5:00 PM	Z	29	plastic	lateral	skylight opening	building	new construction	roofer	1761
Fall from elevation	na	na	>6' no		ရ	Ş	none	none	none	1	none	umkno wn	Z ,	36	concrete	lateral	none	building	repair	roofer	1761
Fall from elevation	na	na	>6 no		3		none	none	none	0	none	unkno wn	×	42	none	none	Sau	building	герай	netal -roof	1761
Fall from elevation	na	na	8	ou	g.	yes	none	none	none	1 0	none	unkno wn	Z	61	roof shingles	lateral	none	building	unknown	roofer	1761
Fall from elevation	na	na	or ><	임	ou	yes	none	none	none	0	none	unkno wn	×	33	a/c vents	lateral	ladder	guipling	unknown	unknown- sheet metal?	1761
Fall from elevation	a	na	\$	ou	og G	yes	none	none	shovel	1	) none	umkno wn	Σ,	53	gravel	lateral	skylight cover	building	unknown	roofer	1761
Fall from elevation	na	na	,9 <u>/</u>	ou	91		none	none	none	0	none	unkno wn	Σ	26	metal roof sheets	lateral	none	warehouse	new construction		1761
Fall from elevation	na	na	%	yes- failed	ou	ys.	none	none	none	1	) none	unkno wn	Z	56	roof	lateral	fall protection system	building	unknown	roofer	1761
Fall from elevation	na	na	, ,	ou	no Di	yes	none	none	none	1 0	) none	unkno wn	_ ≥	4	roof shingles	lateral	none	house	unknown	roofer	1761
Fall from elevation na		na	, ^	>6' no wes			none	none	none	0		,			roofing felt	[atera]	900	esi oq	- L		

unkno wn M 33 none	M 33	circular unkno abrasive saw 1 0 none wn M 33	1 0 none wn M 33
2:35 PM	0 none II	none 1 0 none	1 0 none
unkno	0 none	none 1 0 none	1 0 none
1:45 PM	0 none	none 1 0 none	1 0 none
unkno wn	1 none	none 0 1 none	crane project none 0 1 none
	] none	none 0 1	0
	0 none	none 1 0	1 0
:	1 none	pulley, rope 1 1	truck project pulley, rope 1 1
1	0 none	none 1 :0	.1
	0 none	none 1 0	none none none 1 0
1	0 none	none 1 0	none none none 1 0
	0 none	none 1 0	none none 1 0
	0 none	none 1 0	aerial liff project inone 1 0
:	1 none		no forklift project none 1 1 none

УЛС	1741	742	1799	1742	1742	1742	1742	1742	1742	1741	1742	1542	1741
ig.		ite 17				2	1						
photographer none	chimney work- mason?	drywall- checking site 1742	unknown	drywall- installing metal studs	drywall	unknown- plaster company	drywali	plasterer	insulation worker	mason	insulators	unknown	northern for
unknown	unknown	unknown	unknown	new construction	new construction	unknown	new construction	unknown	unknown	new construction	илкломп	unknown	new
mountain road	building		· · · · · · · · · · · · · · · · · · ·	නි	building	unknown	house	house	power plant	house	tank	building	
none	ladder	scaffold	none	scaffold	scaffold	elevated work platform	scaffold	scaffold	none	none	scaffold	none	altering formwork
none	none	none	попе	lateral	lateral	none	lateral	lateral	lateral	hoisting none	lateral	lateral	altering
none	none	none	none	studs	end caps	none	drywall	"pnu"	insulation/ro of siding	block and mortar	metal straps lateral	concrete panels	
unkn own	38	38	72	3	35	32,44 ,45	21	65	<b>2</b> 6	39	23	46	
Z	Σ	Σ	Z		Z	M M M	Z	Z	Z	Z	Z	Σ	
umkn own	11:00 AM	2	unkmo wn	unkno wn	umkmo wn	unkno M,M 32,44 wn ,M ,45	umkmo wm	unkno wn	7:45 AM	2:30 PM	umkno wn	umkmo wn	
none	none	none	none	none	none	none	none	none	none	wous	попе	none	
	0	0	0	0	o	0	0	o		0	0	0	
camera 0	none	none 1	none 1	none 1	none 1	none 3	hammer 1	none 1	none 1	none	none	crowbar; nylon slings	900
project	none	none	none	попе	none	none	none	попе	none	none	none	none	e do
forklift	none	none	none		none		попе	none	none	none	none	none	e co
ou	sv.	Q	yes		ou	ou	ýg	ou	sex	ю	ou	no	
yes 1	no ye	01	9		e e	yes	2	2 2	ş S	2	:	<u> </u>	
										2			unk no um no
ou ><	ou ><	>6' no	>6' no	1-6' no	ou ,9<	unk no unk wn wn	, j	ou >9<	unk no wn no	ĭ >¢	>6.   Fa	ou ,9<	i e ii
				-									
na	na	na	na L	na	na	e u	na	na	na	na	na	na	
<u>eu</u>	na	na	na	Па	na	na	Da	na	na	na	<u> </u>	na	
Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Ball from elevation na na

1-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   10-2   1	r d	ec	ou >e,	yes	ou s	none	none	none	0	none	unkno wn M	38	soffits	none	work platform	garage	new construction	carpenter	1751
					3	none		none	0		unkno wn M		control wire	altering		air plenum			1731
			1-6, nc			none	none	none	0	~~~~~~~~		8	light bulbs	hoisting	adder	electric building		electrical	1731
crane         project         none         11         0 none         wm         M         61         platform         bosting         formal         building         construction         potter           none         none         11         none         wm         M         31         nordar         saffold         building         construction         potter           none         none         11         0 none         wm         M         48         none         saffold         building         repair         parpet repair           none         none         11         none         wm         M         2677 none         none         saffold         building         repair         parpet repair           none         10         none         11         20         saffold         building         repair         building           none         10         none         11         0 none         AM         20         none         saffold         building         mator           none         none         1         0 none         M         20         none         building         none         none         building           none         none	na		) >6		ļ	none	1	none	1 0		unkno wn M	1	wood	lateral		building; exterior light	unknown	siding installers	1761
none         none         none         wn         M         31         nontar         lateral         scaffold         building         creaturation         mason           none         none         none         wn         M         48         none         none         scaffold         building         reparation         none         none         none         wn         MA         26.7         none         none         scaffold         building         reparation         none	ពន		>6' 'Ya			crane	ۇ سى	none	0		unkmo wn M		work platform	hoisting	vertical wall form	building	new construction	spotter	1622
none         none         none         none         none         scaffold         building         repair         parapet repair           none         none         none         none         none         none         scaffold         building         repair         no noof           none         none         none         1         2         none         NA         M         26         frame         none         building         restoration           none         none         none         1         0         none         NA         M         29         frame         none         puilding         restoration         puilding           none         none         none         NA         M         29         frame         none         puilding         nuknown         unknown           none         none         NA         M         29         frame         none         puilding         nuknown         nuknown <td>ra La</td> <td></td> <td></td> <td></td> <td></td> <td>none</td> <td>none</td> <td></td> <td>1</td> <td></td> <td>unkno wn M</td> <td></td> <td>mortar</td> <td>lateral</td> <td></td> <td>building</td> <td>new construction</td> <td></td> <td>1741</td>	ra La					none	none		1		unkno wn M		mortar	lateral		building	new construction		1741
none         none         1         2         none         1.00         MA         26,7% none         none         scaffold         building         renovation         restoration           none         none         1         0         none         1.00         MA         29         frame         hoisting         scaffold         mknown         mknown         distranting           none         none         1         0         none         AM         M         29         frame         opper         popper         none         popper         none         pullding         mknown         mkn	na	:	>6' nc			none	none	none	0		umkno wn M		none	none	Ę	building	repair	parapet repair on roof	1741
none         none         none         1 0 none         PM M         29 none         rearing         rearing </td <td>138</td> <td>}</td> <td></td> <td>2</td> <td>1</td> <td>none</td> <td>none</td> <td>none</td> <td>1 2</td> <td>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</td> <td>unkno M. wn M.</td> <td>M 26,</td> <td>,? none</td> <td>none</td> <td>Ę</td> <td>building</td> <td>renovation</td> <td>building restoration</td> <td>1741</td>	138	}		2	1	none	none	none	1 2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	unkno M. wn M.	M 26,	,? none	none	Ę	building	renovation	building restoration	1741
none         screw gnn         1         0         none         AM         M         29         none         none         poper         none         pullding         mknown         mknown           none         none         none         mkno         mkno         copper         new         new <td><u> </u></td> <td></td> <td>ů &gt;6</td> <td></td> <td></td> <td>none</td> <td>none</td> <td>none</td> <td>0</td> <td>,</td> <td></td> <td>3</td> <td>,</td> <td>hoisting</td> <td>scaffold</td> <td>unknown</td> <td>unknown</td> <td>scaffold dismantling</td> <td>1741</td>	<u> </u>		ů >6			none	none	none	0	,		3	,	hoisting	scaffold	unknown	unknown	scaffold dismantling	1741
none         none         1         0         none         wn         M         52         tubing         lateral         none         building         construction         plumber           none         none         1         0         none         wn         M         52         block         lateral         scaffold         building         construction         block           none         none         1         0         none         wn         M         57         block         lateral         scaffold         building         unknown         block           none         none         1         0         none         wn         M         57         block         lateral         scaffold         building         unknown         mason	na		ñ ^			none	none	screw gun	1.0		11:30 AM M		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	none	roof opening	building	unknown	unknown	1743
none         none         1         0         none         wn         M         52         block         lateral         scaffold         building         construction         block           none         none         none         wn         M         57         block         lateral         scaffold         building         unknown         block           none         none         none         wn         M         57         block         lateral         scaffold         building         unknown         mason	na		u >0,			none	none			************			copper	lateral	none	building	new construction	plumber	171
none     none     in none <t< td=""><td>na</td><td>}</td><td>п ,9&lt;</td><td></td><td></td><td>none</td><td>none</td><td></td><td></td><td></td><td>unkno wn M</td><td></td><td></td><td>lateral</td><td>scaffold</td><td>building</td><td>new construction</td><td>,,,,,,,,,,,,,,,,,,,,,</td><td>1741</td></t<>	na	}	п ,9<			none	none				unkno wn M			lateral	scaffold	building	new construction	,,,,,,,,,,,,,,,,,,,,,	1741
none none none lone un M 45 none none none building unknown unknown	na		, u	9		none	none		- 4	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	unkno wn M	3		lateral	scaffold	building	unknown	mason	1741
	na		, , , , , , , , , , , , , , , , , , ,	ã	o yes	none		none	0		unkno wn M	:		none		building	unknown		1741

Fall from elevation	па	na	>6' no	91	yes	yes	aerial lift	project	none		none	8:00 AM	Д М	48,41	M.M 48.41 sheetrock	lateral	none	movie theater	new construction	drywall	1742
Fall from elevation	na	na	26, 19	2			none	none	none 1	0	none	6:30 AM	Σ	4	brick	lateral	scaffold	building	unknown	mason	1741
Fall from elevation	na	na	79 7	yes	9	ou	попе	none	boatswain chair/rigging	0	none	unkno wn	Z		·	none	boatswain chair	chimney	unknown	arts	1741
Fall from elevation	na	na	·	ou	ou	yes	попе	1	none 1	0	none	unkno wn	Z	25	none	none	none	a 50:	new construction	unknown	1541
Fall from elevation	na	na	1-6' no	6	2				none 1			10:00 AM	×	3			Pļ	house	new construction		1741
Fall from elevation	na	па	>6, 10	, on	ou		none	none	none 1	0	none	1:30 PM	Σ	21	none	none	none	building	repair	*************	1731
Fall from elevation	PG.	па	1-6' no	SI SI	ou		none	none	screw gun	0		unkno	Z				dder	building	wn	electrician helper lost balance	1741
Fall from elevation	na	na	50	ou	ou	ş	none	none	none 1	0	none	unkno wn	Z	28	mortar	lateral		building	unknown	mason	1741
Fall from elevation	na	na	%	on Di	ou Ou		none	neon	none 1	0	none	unkno wn	⋝	35	insulated paneling	lateral	none	building	unknown	roofer	1741
Fall from elevation	na	na	<b>,</b> %	ou	yes	o <u>u</u>	none	none	none			unkno wn	Μ̈́	M,M 42,40	paint	s altering l	caffold utached to adders	dock canopy	unknown	00	1741
Fall from elevation	na	na	>9, >0	ou	og u	o <u>u</u>	попе	none	none	1	none	unkno wn	⋝	4	none	none	one	building	unknown	i.	1795
Fall from elevation	па	na	1-6' no	o <u>l</u>	<u> </u>		forklift	project	none	1 0	none	unkno wn	Z	29	oerson	lateral		none	unknown		1751
Fall from elevation	na	na	, ,	ou	<u>e</u>		none	none	knife	0	none	11:00 AM	Σ	8	roofing caulk	altering	ladder	building	repair	10	1741
impro per per Pall from elevation na na >6' use yes yes	па	na	\$	impro per use	8		none	none none none	none	0	none	unkno wn	Σ	17	none	none	ladder	fiberglass storage tank	unknown	plumber/pipe fitter	1711

1742	1795	1711	1711	1711	1793	1793	1791	1711	1791	1711	1711	1791	1795
unknown	farm worker		unknown		window work; 1793	window casing installer	ker	welder/cutter 1711	unknown- steel company		unknown	steel worker	laborer
unknown	demolition	new construction	unknown	unknown	repair	Ę	Ħ	new construction	new construction	repair	ıction	unknown	demolition
unknown	silo	store	none	undergrou nd pipe			:	building	building	building	building	building	steam
scaffold	ladder	roof openings	hole in ground	none	step ladder	scaffold	попе	ladder	roof opening	none	ladder	roof openings	, pa
попе	hoisting Aoweri ng	ing	none	_ 3	altering	altering scaffold	hoisting none	none	lateral	none	none	lateral	lateral
none	sections of silo	wood; extension cord	none	tib	window	window casing	decking, bolts, people	none	roof tie down devices	none	попе	metal roof panel	in the second
59	17	37	52	45	59	4	36,30	9	72	23	98	35	
Σ	Σ	ĭ	Z	Z	⋝	Z	Μ̈́M	Z	Z	Σ	Z	Z	>
umkmo wn	umkno wn	unkno	unkno wn	unkno wn	umkno wn	umkmo wn	unkno wn	2:00 PM	unkno wn	unkno wn	unkno	unkno wn	11:25
none	none	none	none	none	none	none	none	none	none	none	none	none	
0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	0	0	0		-	0		0	0	0	
		_	1				1	<u>er</u>			1	1	
none	none	saw	none	none	none	none	none	welder	none	none	none	none	
none	none	none	project	project	none	none	project	none	none	none	none	none	
none	попе	none	scissor lift	compact	none	none	forklift	none	попе	none	none	none	
, Aes	Sak	yes	Ŋ	SS SS	ន្ត	g	e.	88	yes		yes	yes	
ရ	2	g.	2	o	9	2	ya S	ю	임	2	2	yes	
2	92	8	ou	90	9	9	ou	9	9	9	ou.	20	7
w no	·×	×	7	1-6 feet no	1-6' no	ou >6/	79	7	01 >0∕	79 7	unk no wn no	9	
na	na	na	na	na	na	na	na	na	na	na	na	na	g E
na	na			na	na		na	na	na	pu		na	
Fall from elevation	Fall from elevation		Fall from elevation	Fall from elevation	Fall from elevation		Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from electrica

Fall from elevation	na	na	, V V	yes	yes	ou ou	none	none	none 1		none	unkno wn	Z	26,43 none	3,000	none	scaffold	water tank unknown	unknown	unknown	1721
Fall from elevation	na	na	n s /9<	unkno	0		none	none	none 1		none	unkno wn	≥	59	none	none	platform	ипкломп	unknown	unknown	1721
Fall from elevation	na	na L	л >6,	9	00	yes	none	none	none 1	0	none	unkno wn	Z	34	insulation and tape	lateral	none	building	unknown	insulator/stee I worker?	1791
Fall from elevation	na	na	>6. 1. 1. 4.	,	8	yes	none	none :I	prybar 1	0	none	unkno wn	≥	51	**	laterai	none	oil refinery tank	unknown	steel worker	1791
		na	п b п		26				welding equipment 1	0	none	9:15 AM	Z		3	попе		building	new construction		1791
Fall from elevation	na	na		ou	e e		none	none	none 1	0	none	unkno wn	Z	28	none	none		building	unknown	steel worker	1791
		na	0 <u>1</u>		2		none	none	none	0	none	1:50 PM	Σ	33	g.	_ :	ಚೆಬ	warehouse	new construction	welder	1791
		na	,9 ,9	ou	2		ກວກອ	none	none 1	0	none	unkno wn	Z	8	none	none		building	new construction	welder	1791
Fall from elevation	na	па	ou >€		e e	yes	none	none	none 1	0	none	unkno wn	Z	37	steel brace	altering	none	building	unknown	steel worker	1791
Fall from elevation	па	na		ou	ou		none		none 1	0	none	unkno wn	Σ	19	none	none	ladder,scaff old	building	new construction	mason	1741
	na	na	>6' no		yes			project 1	none 1	0	none	unkno wn	Σ	8	sheet rock	none	none	building	new construction		1742
Fall from elevation	na	pa	ou )9<		ou		none		none 1	0	none	umkmo	Z	30	chicken wire	lateral	scaffold	building	new construction	unknown- installing steel?	1791
	na	na		ou	e			none	none 1	0	none	unkno wn	Σ	9	floor	lateral	none	building	new construction	steel worker	1791
	na		ou )9<		no		none	none	torch 1	0	none	unkno wn	Z	45		altering none		grain bin	demolition	cutter	1795

drywaller 1742	unknown 1742	painter 1799	drywall? 1742	drywall 1742	electrician 1799		carpenter? 1751	3	inspector 1796			boilermaker 1711
unknown	unknown	repair	new construction	unknown	demolition	unknown	unknown	demolition	new construction	repair		repair
building	building	building	supermark new et cons	building	unknown	building	building	microwav e tower	communic ations tower	building	powerplan	100
	floor opening	scaffold	scaffold	none	none	working platform	ladder	none	none	none	9	Shone
altering	none	none	lateral	altering none	hoisting none	none	lateral	none	none	lateral		
tape/drywall altering none	none	none	metal t-bar	drywall	light pole	none	wood	none	none	oil	welding	Tool
31	649	9	36	23	36	M,M 52,32 none	4	5	33	5	84	Ē.
unkno wn M	Z	Z	Σ	Σ	≥		Σ	Z	Σ	Σ	≥	
unkno wn	unkno wn	unkno wn	12:30 PM	unkno wn	unkno wn	11:30 AM	unkno wn	unkno wn	unkno	unkno wn	4:55 PM	
none	none	none	none	none	none	none	none	none	none	none	none	
0		0	0.		0		0	0	8	0	0	
none I	cart 1	paint brush/scraper 1	none 1	none 1	bucket 1	none 1	hammer I	none 1	none 1	none	welder 1	
none	none	none	none	none	project	·····	·	none	none	elevator project	none	
none	none	none	none	none	aerial lift	forklift	none	none	none	elevato	none	
yes	yes	yes	yes	ya	yes	o <u>a</u>	yes	8	NGS.	sk	ou	,
6	2	2	9	o B	9	S) A		2	ou ca	<u>e</u>	8	
yes- guardr 1-6' ails	р <u>п</u>	ou	ĝ	ou	ou	e e	unkmo	yes- impro per		unk no wn no	>6' no	
1-6'	V	× ×	<b>,</b>	ou .9<	×	, V	, <u>, , , , , , , , , , , , , , , , , , </u>	, V	<u>%</u>	no w	, V	
na	na	na	па	na	na	na	na	na	na	na	na	
na	na	na	na	na	<u>1</u> 3	g	ja e	e	la la	па		
Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	Fall from elevation	

building demolition laborer 1795
stantanta
none building
none
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44 5
unkno wn M
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PL.
4

Fire	na	na	na	01	yes	ou 1	bucket truck	project	none 0		none	9:15 AM	Σ	32	guy wire, bolts	lateral	none	power system	unknown	electrician	1623
Fire	na	ou	na	na	og	3		z project	hydraulic line	0	none	unkno wn	Σ	57	hydraulic fluid	none	unknown	none	unknown	:	1611
Natural causes	na	na	na		91		none	none	none 1	0	none	12:30 PM	Σ	84	none	none	none	none	unknown	welder	1629
Natural causes	na	na					none	none	none	0	heat	unkno wn	2 ≥		roofing debris	lateral	none	building	unknown	roof laborer	1761
Natural causes	na	ru	па	na	8	Oil	none	none	none 1	0	none	8:00 AM	Z	20	none	none	none	none	unknown	unknown	1623
Natural causes	EU.	na	23	na	9	ê	truck	project	none	<u>.</u>	none	umkno wn	Σg	8.	none	none	none	none	unknown	unknown	1752
Natural causes	na	na	na	na	ou			none	none		none	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Z 20	- 1	none	none	none	none	unknown	3	1623
Natural causes	Ba	na	na	na		}	none	none	none 1	0	none		Z g	8		none	none	none	unknown	umknown	1629
Natural causes	na	na	χ.	yes			0 0 0 0 0 0 0 0	none	none	0	none		ο Σ	55	none	none	none	tower	new construction	welder	1791
Natural causes	na	па	no m	unk no wn no	ì			none	none	0	none		Z S			none	ladder	wall	unknown	unknown	1761
Natural causes	na	na	E	E	2	9		none	none	1	none		9 Z	22	none	none	none	house	unknown	sheetmetal duct installer	1711
Natural Causes	na	na	na	กล กล			none	none	none	0	none		Z	33		none	none	house	unkmown	carpenter	1521
Natural causes	na	eu au	na	eu.	o <u>n</u>	***********		none	eld	1	heat	3:50 PM	Z	8	none	none	none	water tower	unknown	unknown	1791
Natural causes		na	w no my	n no	unk no wn no no	ou c		none	none	0	none	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Z	4	none	none	ladder	unknown	unknown	unknown	1761

Natural Causes	na	na	, V	ou	Q.	2	none	none	none 1	0	none	umkno wn M	[ 37	none	none	none	building	unknown	roofer	1542
Natural causes	na		na na	;	по		none	none	none 1	0	none	unkno wn M	49	nwouziun	vn none	none	landscape	unknown	unknown- trimming brush	1742
Natural causes	Ba Da		па		ou	ou		none	none	0	none	umkno wn M	- 84	none	none	none	Jence	repair	Jaborer	1542
Natural causes	na		na		9	ou	none	попе	none	0	none	2:45 PM M		none	none	none	none	unknown	unknown	1629
Natural causes	na	na	na	na	yes	ou	loader	project	none 1	0	none	unkno wn M	1 51	none	unknow	ow none	none	unknown	owner	1542
Natural causes	na	na	10	ou	ye.	ou	backhoe	project	none	0	none	7:00 PM M	f 52	none	none	денср	sewer system	new construction	equipment operator	1623
Natural causes	na	na	<b>7</b> 9	по	ရှ	ou	none	none	none 1	0	none	11:00 AM M			lateral	l stepladder	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	new construction	unknown- steel worker?	1791
Natural causes	na	na	па	na	2	ou	none	none	none	0.	none	12:00 PM M	1 58	ă	none	none	none	unknown	unknown	1623
Natural causes	na	na		na	ou	on	none	none	none 1	1	none	unkno wn M	38	none	none	none	none	unknown	unknown	1629
Natural causes	na	na	n a	na	ou	ou	none	none	none 1	0	none	11:15 AM M	4 63		none	:	guipling		mason	1741
Natural causes	na	na	па	na	9	00	none	none	none 1	0	heat	3:00 PM M	7 54	none	none	none	tank	repair	laborer	1629
Natural causes	Da Da	na	na	na na	9	ou	none	none	none	0	heat	12:30 PM N	39	none	none	none	шкложп	new construction	mason	1741
Natural causes	na	па	na	na	ou	o _r	none	none	none	1	none	2:30 PM N	M 62	3	none	none	house	new construction	electrical	1731
Natural causes na yes na na no no	na	yes	na	na	ou		none	none	cutting torch	1	none	umkno wn M	A 32	***************************************	none	none	culvert	repair	welder/cutter 1629	1629

na na no	no none none na 1 0 he	2 heat P	2:00 PM M	77	none	none	p none sy	piping new system cons	truction	laborer	1622
unk no wn yes no no none none	none 1 0 no	none v	unkno wn M	52	metal sheeting	lateral	scaffold b	building un	unknown	steel worker	1791
na no no nome none	none 1 0 no	none v	unkno wn M	61	none	none	none	unknown ur	unknown	drywaller	1742
na na no no manliff project	none 1 0	heart u attack v	unkno wn M	8	cable trays	lateral	noue	unknown ur	unknown	electrical	1731
1-6 na no none none	none 1 0	none v	unkno wn M	78	none	none	noue	unknown ur	unknown	painter	1799
na na no no none none	none 1 0	none v	unkno wn M	8	none	none	none	none	none	plumber/pipe fitter	1711
na 1-6 no no no none none	none 1 0	none v	unkno wn M	5	piping	altering s	altering stepladder u	unknown ur	unknown	plumber/pipe fitter	1711
na na	none 1 0	none	unkno wn M	45	none	none		various ur	unknown	hvac mechanic	171
na na no no none none	dolly 1 0	none	8:50 PM M	5	cabinets	lateral	none	none	unknown	carpenter	1751
	none 1 0	none	unkno wn M	55	none	none	none		попе	equipment operator	1611
na na no no none none	none 1 0	none	unkno wn M		none	none	none	none .u	unknown	unknown	1611
na na no no forklift pr	project none 1 0 n	none	11:30 AM M	52	cedar lumber	lateral	none		unkmown	equipment operator	1611
na na no none	none 1 0	heat	PM M	22	none	none		n line	unknown	laborer (pipelayer)	171
Natural ceuses na na na no no none none		ecocicio	2:45			******					

Natural causes	na	กล	na	ou	2	<u>e</u>	none	none	none 1	0	none	5:20 PM	Σ	35	none	none	none	house	repair	roofer	1761
		1	5		1			none	none .1	0	none	unkno wn	Z	35	_	_		unknown		drywall	1751
Natural Causes					•		Ι.	÷	none 1	<u> </u>	Done	unkmo	:			:	*	guardrails and culvert	unknown	ţ	1794
	g 0	Ves	n n	na	2	, Acc	3		unknown 1		none	umkno wn	}		5	1		reactor	repair		1799
			na i		og og			none	circular saw	0	none	umkno wn	Z	}		55		building	unknown		1761
Other	}	na	ra I		ou		tanker truck	project 1	none 1	0	none	11:00 AM	Z	59	water	lateral	none	highway	new construction	truck driver	1794
· · · · · · · · · · · · · · · · · · ·		na	E	па	00		scraper	project :	none 1	0	none	unkno wn	Z				попе	none	unknown	equipment operator	1794
	1	yes	na	ou	ou	nwor			none 1	0	none	unkno wn	Z	8	TW.C	none	none	building	repair	plumber/pipe fitter	1711
		na Da	Da .	na Pa	9		dumptru ck	project	none 1		none	unkno wn	Z	5	sand	lateral	s pile es	golf course	new construction	equipment operator	1611
Struck by equipment		na		na	80	ou	crane	project	wrecking ball	0	none	unkno	Z	********	попе	none	none	parking garage	demolition	demolisher	1542
		na		na	8			private	none 1	0	none	unkmo	Z	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	traffic controls	laterai	none	highway	new construction	traffic controller	1611
	na	na		eu	Ŋ	no	backhoe project	,	outrigger 1	0	none	unkmo	Z		none	none	excavation	unknown	unknown	compacting soil	1794
	na	na	n n	na	y S	yes	trackhoe; project	project	none .1	0	none	unkno	Z	9	debris	lateral	none	unkmown	unknown	laborer	178
	3			3			tractor-					umkmo	1		traffic					traffic	5

1794	1623	179	1611	1611	1 <b>7</b> 8	1 1611	1611	1724	1611	1611	1796	n 1611	
equipment operator- driller	equipment mechanic	plumber/pipe fitter	equipment operator	equipment mechanic	laborer	passenger on roller	laborer	plumber/pipe fitter	laborer	unknown	elevator repairer	motor transportation occupations 1611	
new construction	unknown	unknown	new construction	unknown	new construction	unknown	unknown	repair	repair	new construction	repair	unknown	new
шкломп	unknown	unknown	unknown	none	road	roadway	road	drainage pipe	roadway	unknown	building	none	water
trench	none	none	none	none	none	none	none	trench	none	none	ladder	none	
none	none	none	none	none	none	none	lateral	none	lateral	lateral	none	none	
none	none	none	none	none	none	none	rock	none	concrete	dirt	elevator	none	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
57	83	35	37	57	6	23	9	51	14	55	39	4	
×	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	
unkno wn	unkno wn	unkno wn	11:00 AM	unkmo wn	1:00 PM		umkno wm	2:10 PM	0	unkno wn	unkno wn	unkno wn	11:34
none	none	none	none	none	none	none	none	none	none	none	none	none	
0	й О	ŭ O	ă;	ĕ	ň o		ě o	ŭ O	***********	Ē O	ů O	5	
- 4	-	-				-							
none	pipe wrench	none	none	none	eye level	попе	none	bucket	none	none	none	none	
project	project	project		project	project	project	project		project	project	project	project	
boring machine project	drill	backhoe: project	scraper	loader	scraper	roller compact or	dumptru ck	backhoe: project	loader	dumptru ck	elevator project	flatbed truck	dumptru
ou	ou	on On	····	no	OI.	o.			yes	e e	ou	ou	
OL	ž	ya	yes	ķ	yes S	yes	Š	yes	yes	yes	8	yes	~~~~~
na	na	na U	ou	13	na	na	па	na	na 113	na	ពង	yes	
16	па	na	Па	gg.	па		па	4		13	na		
na	na	na	na	na	pa	па	na	na	na	na	na	eu	
na	ю	na	na	na	na			na	na	na		na	
Struck by equipment	Struck by equipment	- 1	Struck by equipment	Struck by equipment	Struck by equipment			3		Struck by equipment	Struck by equipment	Struck by equipment	

ya
tractor- unknow yes no trailer n
or, two pickup yes no trucks project
front end end yes unknown loader project
yes no vehicle private
flatbed truck
semitru ck
dumptru yes no ck project
asphalt truck
no loader
vehicle
§

Struck by equipment	e E	na	na na	Aces	<u></u>	dumptru	u project	none 1	0	none	0	M	) none	none	none	unknown	unknown	electrical	1742
		па	5-7 feet na		o s		backhoe: project	none	o	none	2:15 PM N	⊼ 4	) none	none	trench	nd electrical lines	renovation	laborer	1623
		n a	na		<u>0</u>		: private	none 1	7	none	unkno wn M	3		s lateral	3	highway	repair	traffic controllers	1611
Struck by equipment	na	na	na no	yes	s no	vehicle	private	none 1	c	none	unkno wn M	09	) none	none	none	bridge	unknown	bridge tender 1611	1611
Struck by equipment	na	na	na na	on On	yas	s dozer	project	rebar 1	0	none	unkno wn M	f 37	7 none	none	none	none	unknown	equipment operator	1611
Struck by equipment	na	na	na na	yes		crane	project	shackle/lines 1	0	none	unkno wn h	M 37	7 none	none	barge	none	unknown	spotter	1629
		na	4 na		<u>0</u>	_	e project	none 1	0	none	0	M 42		ing lateral	************	none	new construction		1629
	na	na	na na	yes	s yes		widenin g equip ment project	none 1	0	none	unkno wn N	∑ 4	46 none	none	none	roadway	unknown	paving worker	1611
3	na	na	na na	ž	s Ves	s forklift	project	none	0	none	1:30 PM N	M 19	none	none	none	none	unknown	metal worker	1541
		na	na na			tractor- trailer		air compressor 1	2	none			47,7,9 debris	lateral	il none	bridge	unknown	bridge decking installers	1611
	na	na	na na	yes	s 100		ណ project	none 1	0	none	umkmo wn N	M 39	rock	lateral	l none	roadway	repair	equipment operator	1611
Struck by equipment	na	na	na na		s no		sweeper project and and vehicle private	none 1	0.	none	Q	M 84		lateral		roadway		equipment operator	1611
		na	na na	yes	ou s	o crane	project		0	none	unkno wn	M 45		none	none	baghouse	unknown	spotter	1796 or 1711
Struck by equipment in an an an an										*********	unkno			•••••••				engineering	

Struck by equipment	na	па	na	na	yes	ou		project :r	none 1	0	none	AM 1	Z2	~~~~~~~~~~	windrow 1	lateral	none	housing complex	new construction	grade checker 1629	1629
	na	u	na	na	ya	ou	aerial lift platform: project		none 1	0	*	0	M 17	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	none	none	none	building	new construction	floor man operating aerial lift	1721
	na	na	na	na	yes	ou	automat ed work platform: project		none 1	0	none	umkno wn 1	M 38	**************************************	none	none	none	aircraft maintenan ce stand	unknown	78	1791
Struck by equipment	na	na	na	na	yes	ou	dump truck		none	0	попе	unkmo wn J	M 35		asphalt	lateral	none	highway	repair	construction trade	1611
Struck by equipment	pa	na	na	na	yes	ou	dumptru ck		none 1	0			F 50	-				roadway	new construction	flagger	1622
	pa	na	Ба	na	yes	ou	crane	project i	bucket 1	0	none	unkno	M 55	:	none	none	none	bridge	demolition	demolisher	1622
	na	na	na	na	yes	ou u		project r	none 1	0	none	5:00 AM	 	36 110	none	none	none	roadway	unknown	flagger	1622
Struck by equipment	Da Di	na	pg.	na	X A	ñ		by 2 differen t contra	none	0	none	1:05 PM	Z Z	20 no	none	none	none	limited access highway	erection/high way repair ktrs		1791
Struck by equipment	na	na			yes	Q.	dumptru ck	project none	none	0	none	0	Z S	<b>2</b> 2	none	попе	none	none	unknown	Ę	1622
Struck by equipment	na	eu			yes	on	truck	unknow	none 1	o	none	unkno wn	Z	S3 no	none	none	concrete barriers	roadway	unknown	umkmown	1622
Struck by equipment	na	na	ğ	ou	yes	ou	vehicle	private	none 1	0		unkno wn	⋝	50 n	none	none	none	highway	repair	Ę	1629
Struck by equipment	or Or	na	na	na na	£	yes	head oilfield pump;	попе	painting equipment	0	none	0	Z	45 n		none	none	oilfield production facility	nurknown	painter	1721
Struck by equipment	na	na	na	na	yes	ys S	: 8	project	none 1		none	umkno wn	M,M	M,M 22,28 none		none	none	road	unknown	concrete finisher and a mason	1771
Struck by equipment na		na na ne yes yes	na	na	yes	y S	2	project none	none 1	0			Σ 4	40	soil cement lateral	lateral	none	bridge	unknown	ent rs	1629

Struck by equipment	na	na	.9<	9	yes	ou	truck; bucket truck	private; project	none 1	o	none	4:35 PM	Z	14	light bulbs	altering none	none	roadway traffic signals	repair	electrical- traffic	1731
Struck by equipment	eu	na	na	na	yes	ou	vehicle	private	none 1	0	none	unkno wn	Σ	48		none	none	roadway	илкломп	laborer	1622
Struck by equipment	au	na 	гu	na	yes	on Ou	material hoist	project	none	0	none	unkno	≥	42	none	none	none	unknown	unknown	unknown	1771
Struck by equipment	pu	na	ng Da	na	yes	оп	:	project	personnel carrier 1	0	none	unkno	Z	49	pole	hoisting none	none	none	unknown	,	1731
Struck by equipment	na	na			yes	ou	61.5	private	none 1	0	none	unkno wn		22	none	none	попе	ay	unknown	flagger	1611
Struck by equipment	na	na	na		yes	ou	dumptru ck	project	none	0	none	unkno	Z	45	none	none	none	roadway	unknown	construction laborer	1611
Struck by equipment	na	na	na	gu	y		grader	project	grade level marker	0	none		_ ≥	20	earth	lateral	none	none	unknown	surveyor	1611
Struck by equipment	na	na	na	na	yes			private	none	0	none	8:30 AM	Σ	4	poom	none	none	road sign	new construction	unknown	1611
Struck by equipment	na	na	na	na	Š	ou	crane	project	none 1	0	none		Z	4	gravel	hoisting none	none	interstate	unknown	laborer	1771
Struck by equipment	na	na	gu	g	Š	og.	backhoe: project	project	none 1	0	none		Σ	39	rock	hoisting none	none	none	unknown	unloading/loa ding rocks into bucket	1741
Struck by equipment	na	na	na	na	8	***************	compan y vehicl e	private; project	none 1	0	none	:	Σ	72	none	none		highway	unknown	site- electrician by trade	1731
Struck by equipment	na	na	na	na	8	o o	dumptru ck	project	none	0	none	9:35 AM	Σ	8	asphalt	lateral	none	roadway	repair	asphalt worker	1611
Struck by equipment	na	na	na	па	yes	ou	dumptru ck	project	none 1	0	none	2:20 AM	Σ	20	none	none	none	roadway	repair	laborer	1622
Struck by equipment na na	na	na	na	па па по	<u> </u>	yes	wood chipper project	project	hood to chipper	0	0 none	4:30 PM	Σ		none	none	none	none	unknown	equipment operator	1795

na na yes	***************************************	no bi	backhoe project		coring machine	0	none w	unkno wn M		none	none	excavation	unknown	unknown	unknown	1623
na na no yes none none	none		one		grinder 1	0	n noue	unkno wn M	90	grinding wheel	none	none	pipe system	unknown	grinder	1799
na na yes no	vehicle	43	rivat		none 1	7	none P	1:00 M, M	M,M 68,45 ,M ,26	45 none	none	traffic control devices	roadway	unknown	sod installers 1629	1629
rash compact na na yes no or unit	trash compact or unit	t act	īg.	project none		0	n noue	unkno wn M		garbage bags	lateral	none	попе	unknown	garbage collector	1611
ractor- na na yes no trailer	tractor- trailer		뫁	unknow		************	none v	unkno wn M	33		lateral	none	bridge	unknown	traffic controller	1611
na yes no crane	crane		[0]	project no	none 1	0	u none v	unkno wn M	70	metal roof decking	hoisting none	none	building	new construction	rigging load when crane tipped	1791
na na yes unknown vehicle	m vehicle	43	Ĭ.	j j	none 1	,	n oue	umkno wn M			none	traffic control devices	roadway	unknown	drill/boring machine operator	1611
na na yes no vehicle	vehicle		풀		none 1	o.	none v	unkno wn M	8		none	none	highway	new construction	************	1611
roller compact na na yes no or	roll <i>er</i> compact or		O	project sn	l dumd dums	0	none v	umkno wn M	.8	попе	none	none	unkmown	unknown	unknown	1791
semitrao tor/trail na na yes no er	semitrac tor/trail er		Ţ	private no	none 1		none /	7:30 AM M			altering		highway	repair	concrete	1611
truck	тисk		Q.	project n	none 1	0	none v	unkno wn M	17	none	none	none	unknown	unknown	flagger	1622
na na yes no truck	trash truck		ity W		none		none	unkno wn M	38	none	none	none	dump	unknown	unknown	1799
na ina yes no crane	crane	-	Ę.	project n	none 1	0	none	umkmo wn M	23	concrete	lateral	cribbing/foo concrete ting for retaining crane wall	concrete retaining wall	repair	spotter	1629
na na yes	c	ehicle pri	.Ĕ	vate	one 1	0	none //	10:32 AM F		none	none	none	light rail project	new construction	flagger	1542

na	na	na na	**********	yes no	dumptru	ru project	none	1 0	none	1:25 PM	Z	58	unknown	lateral	none	ипкромп	unknown	equipment operator	1629
La Par	na	na	}	e s	dump		none	-1	none	10:00 PM	<u></u>	51	unknown	lateral	none	unknown	new construction	spotter	1629
na Da	na	13	:			private		1	:		Σ	61	traffic cone	lateral	traffic control zone	traffic signal light	repair	electrical	1731
pg g		na	3	yes no		project	none	1	noue	unkno wn	Z	28	conduit	lateral	none	unknown		electrical	1731
na				ss ou			none	0		12:30 PM	Z	8	debris	lateral	none	unknown	unknown	equipment operator	1629
na	na	па		1	no vehicle		none	1 0	none	unkmo	Z	52	sealer for pavement	lateral	none	traffic signal	new construction	traffic control ktr- electrical?	1731
חפם	na	กล กล				project	boom	1.0	none	unkno	×	72	pipe	hoisting	hoisting excavation	water main	unknown	glazier	1542
na	na	Па	na	yes n	no backhoe	oe project	none	1	none	11:15 AM	Z	61	none	none	trench	unknown	unknown	mason	1711
na	na	na	9		pickup no truck		none	1.	none		Σ	22	none	none	none	highway	unknown	flagger	1611
Па	na	na no			drilling no machine	drilling machine project	t none	1	0 none	umkrno	Z	8	тее	none	none	none	new construction		1799
na	na	na na				none	none		0 none	umkmo	Σ	33	ammonia nitrate, rock	none	protective magazine	none	new construction		1611
	na	na			io	none	none		2 ice	unkmo	ΣŽ	M,M 25,34	none	none	ladder and platform	power generation new tower cons	new construction	structural metal workers	1542
na	na L	na na			to none	none	none	-	0 none	unkno wn	Z	5	steel rebar	none	scaffold	building	unknown	riding scaffold up to 18 floor	1741
		na na na Ves mo		5	snorkel	ē				7:30						•	new	carpenter working on	

Struck by falling Material	na n	na	na	na	ou	on O	попе	none	none 1	0	none	unkno	Z	52	concrete	hoisting none	none	unknown	new construction	precast concrete beam	1741
Struck by falling Material	na	па		na	9	yes	log Iruck	project	prybar and sledge hammer	0	none	Ρ̄Μ	M 33		logs	hoisting none	none	none	unknown	Matl handling	1521
Struck by falling Material	na	Па		па	8	yes	none	попе	none 1	*************	попе	Q	Z	~~~~~~~~~~~~	beam	hoisting none	none	none	unknown	laborer	1521
Struck by falling Material	na	na	па	na	ou	yes	none	none	acetylene/oxy gen cutting torch	0	none	7:00 AM	ž Ž	39 m	metal drums: altering, none	altering	none	none	unknown	welder/cutter 1611	1611
Struck by falling Material	па	113	na	na	yes	yes	none	none	none 1		none	wn wn	Σ		roof beam	попе	none	mobile home	demolition	supervisor of demolition crew	1799
Struck by falling Material	na Ta		na	na na	yes	ou	none	none	none 1	0	none	umkno wn	Z	35 W.	poom	altering	formwork	unknown	new construction	carpenter	1741
Struck by falling Material	na	na	na	na	yes	o L		none	shovel 1	0	none	unkno wn	Σ	35 stc	stone	none	excavation	stone wall	demolition	carpenter	1799
Struck by falling Material	na	n	E	113	no	yes	semitrai Ier	project	chains/binder s	0	none	unkno wn	∑ 		oncrete		none	unknown	unknown	unknown- equipment operator?	1791
Struck by falling Material	na	na	na	na	ou	ou	попе	none	none 1	0	none	unkno wn	Z	42 9	perlins	none	none	building	new construction	steel worker	1791
Struck by falling Material	na	na	13		e	ou	unknow n-truck?	unknow n	unknow unknow emulsion n-truck? n sprayer l	0	none	12:45 PM		So de	dual tire and axle	none	traffic controls	roadway	repair	emulsion sprayer operator	1611
Struck by falling Material	na	na	na	па	ou	yes	backhoe project	project	none 1	0	none	unkno wn	Z	Fr	rees	lateral	none	none	unknown	equipment operator	1623
Struck by falling Material	na	na	na	na			none	none	none 1	0	none	unkno	≥	7. s	power pole sections	hoisting none	none	utility pole system	demolition	electrician	1623
Struck by falling Material	na	па		unkno wn	o o	9	none	none	none 1	0	none	11:00 AM	Z E		DQ.	none	scaffold system	building	unknown	unknown	1799
Struck by falling Material	na	па па па по учез	na	na	o n	yes	none none	none	none 1	0	none	unkno wn	Z		steel	none		guard house	demolition	demolisher 1542	1542

Struck by falling Material	E C	na	na na	yes	e e	crane	project	vibrating hammer	0	none 7	11:00 AM M	23	sheet piling hoisting none	hoisting	none	unkmown	new construction	pile driving operations/cr ane ops	1542
Struck by falling Material	pa	na	na na	yes	{		none	none 1	0		unkno wn M		terres es es esta esta esta esta esta esta e	none	none	cinder block wall	new 1 construction	c	1542
Struck by falling Material	па	na		yes	2	flatbed truck, crane	project	wire rope slings	c	none	unkno wn M	4	concrete pilings	hoisting none	none	unknown	unknown		1629
Struck by falling Material	Па	na	na na		Ē:	none	none	none 0	0	none v	unkno wn M	30	роом	none	none	house	new construction		1751
Struck by falling Material	na	na	папа	ou	2	none	none	none	0	none	unkmo wn M	20	concrete	none	none	building	new construction	unknown	1751
Struck by falling Material	E	na	>6' na	OI.	ou ou	noue	none	none 1	o	wind v	unkno wn M	21	masonry wall	none	wall braces	wall	new construction	plumber/pipe fitter	1711
Struck by falling Material	<u>E</u>	na	unkno na wn	оп 01	Yes	none	none	chainsaw	0	none v	unkno wn M	20		altering none	none	dam	new construction	clearing/grub bing new site 1629	1629
Struck by falling Material	B	na	папа	y. S		none	none	none	ζ.	none 4	,M, M, M,		2 i, rebar walls	none	none	building	new construction	steel worker	1791
Struck by falling Material	173	па	папа		:	tractor- trailer	project	safety chain	0	none	unkano wn M	52	precast concrete	lateral	none	unkmown	unknown		1752
Struck by falling Material	na	na	na na			none	none	none 1	0	none	12:15 PM M	15	роом	none	none	building	unknown	٦-٢	1761
Struck by falling Material	na	na	na na	yes	F 3	none	none	none	m	wind	3			none	none	steel structure		steel workers 1791	1791
Struck by falling Material		na	na na	:	Š	none	none	none		none	umkno wn M	37,31 M,M 1	31 concrete	hoisting none	none	stairway	new construction	concrete work	1791
Struck by falling Material	na	na	na na	3		hoisting equipm ent	project	nylon slings 1	0 -	none	unkno wn M	31	steel bar joists	buildi hoisting truss	building truss	building	new construction	steel worker? 1791	1791
Struck by falling Material	na	na a	na na na no yes	<u>e</u>		none	none none	none	0	none	unkno wn M	8	none	none	steel	storage area	unknown	unknown	1622

Struck by falling Material	na	na	na na	yes	0 <b>1</b>	o none	e none		bullfloat 1	-	none	umkno wn	, M,	13,25	M,M 43,25 concrete	lateral	none	garage basement floor	new construction	concrete finishers	1771
Struck by falling Material	na	na	na na		ya S	s crane		project none	П	0	none	unkno wn	Σ	22	nuts	lateral	concrete sound barrier	none	demolition	laborer	1611
Struck by falling Material	па	na	na			no crane	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	project none	<u>п</u>	c	none	unkno wn	Z,		anger	noisting	hoisting none	building	unknown	spotter	1711
Struck by falling Material	na	na	na na					project none	<u>n</u>	0	none			73	soil	lateral	concrete wall panel	parking garage	repair	equipment operator	171
Struck by falling Material	Da	na	na na	2	01	none	***************************************	none none		0	none	umkno wn	∑.	42	concrete pole	none	none	none	unknown	laborer	1771
Struck by falling Material	e	na	na na	yes	ou	none		none none		0	none	unkno wn	≥	ß	pues	none	none	bin	unknown	unknown	1611
Struck by falling material	na na	na	na na					none none	- -	o	none	4:45 PM	Σ	4		none	none	building	n <b>ew</b> construction	carpenter	1751
Struck by falling Material	<u> </u>	na	na na		:			none saw	,	0	none	11:00 AM	Z	33		altering	попе	none	new construction	clearing site	1629
Struck by falling Material	na	па	na na	y S	5		forklift pr	project slings	නී 1	0	none	7	Σ	55	yven	lateral	none	unknown	unknown	directing lift	1796
Struck by falling Material	na Pu	na	na na			crane		project :none	1.	0	попе	10:10 AM	Σ	65	top cross section member	hoisting	hoisting platform	asphalt storage silo	demolition	crane operator- demolisher	1796
Struck by falling Material	na	na	na na					none torch	н 1	0	none	umkmo wn	Z	4	electrical control panel	altering none	none	building	demolition	fire watch for cutter	1796
Struck by falling Material	na	2		1			elevator project		welding machine	0	none	unkno wn	:	24	welding machine and leads	none	none	building	repair	elevator repairer	1796
Struck by falling Material	Ва	na	na		ام				ne 1	0	none	unkno	3		pipe	lateral	none	none	unknown	laborer	1623
Struck by falling Material	па	na	na na na yes no	y	S		<u>2</u>	none none			none	unkno	M, M,	45,43	unkno wn M.M.45,43 debris	none	none	building	demolition	demolition demolisher 1531	1531

Struck by falling Material	па	na	na :na		9	ou	none	none	none	1	none	unkno	Z	45	wreckage	none	none	water pumping station	demolition	unknown- demolisher	1795
Struck by falling Material	Eg.	па	unk no wn no		ž,	ou	chain hoist	project		0	none	2:40 PM	Σ.	25	ac unit	hoisting none	none	building	unknown	spotter	1711
Struck by falling Material	na	na	na	na	2	yes	none	none	torch	0	none	unkno wn	Z	<b>4</b>	steel pipe	altering none	none	unkmown	demolition	cutter	1795
Struck by falling Material	na	na	na I	na	yes	91	crane	project	none	0	none	unkno wn	Z	34	concrete beam	hoisting none	none	building	new construction	carpenter	1542
Struck by falling Material	па	па	na	na	ýg	ou	none	none	none	1	wind	umkmo	M,M 22,7	3	wooden beams	none	none	railroad trestle	demolition	demolisher	1795
Struck by falling Material	na	na	na	па	2	DI O	попе	попе	none	. 0	wind	unkno	Σ	R	concrete	none	none	building	new construction	carpenter	1541
Struck by falling Material	na	na	<u> </u>		unkn	ou	none	none	notie	0	none	unkno wn	Z	42 s	steel beam	unknow n	none	unknown	unknown	cleanup	1795
Struck by falling Material	na	na	na	na	9	no	none	none	none	0	none	unkmo	Z	69	tie beam	none	попе	building	demolition	unknown	1795
Struck by falling Material	na	na	eu I	na	ğ	ou	попе	none	chain saw	0	none	unkno wn	Z	39	shelter	none	none	block walls	new construction	шкпомп	1795
Struck by falling Material	na	na	na I		žg	ou	crane	project	none	1 0	none	unkno	Z	8	stee! column	hoisting none	none	house	new construction	carpenter	1541
Struck by falling Material	na	na	na	na	e	yes	none	none	saw	0	none	2:20 PM	Z	45	trec	altering none	none	unknown	unknown	cutting trees	27. 24.
Struck by falling Material	pa L	na	na	na	on O	o o	none	none	none	1	none	unkno wn	Z	8	debris	none	none	building	demolition	demolisher/la borer	1795
Struck by falling Material	na	na	na			ou	dozer	project	none	1	none	2:00 PM	Σ	56	trees	altering none	none	none	unknown	directing equipment operations	1629
Struck by falling Material	na	na na na	па		yes no	ou D	none	none	none	1	0 none	unkno wn M		2	poom	none	none formwork	unknown	new	unknown	1542

	па	па	na na		yes	no none	ie none	e none		2 D	none A	10:40 M,1 AM ,M	M,M 19,21 ,M ,31		lateral	none	building	demolition	laborers	1795
Struck by falling Material	na		unk no wn na		ou A		ie none	ie none	-1		n none	unkno wn M	62	sand/water/c ement mixture	none	cantilever brace	building	unknown	unknown- excavator	1794
Struck by falling Material	na		na na		yes	loader liff, no semi	:			:	п	2		*************	lateral	none	none	unknown	unknown	1623
Struck by material	na	na	na na		yes y		boring machine project	ject wrench	ф Т	0	u none w	unkno wn M	32		none	none	none	unknown	laborer	1623
Struck by material	na	na	na na				ie none	ie rope	-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	n noue	0		*******	none	none	electric power plant	unknown	unknown	1796
Struck by material	na	na	ou >¢,			no crane		project none	_	0	n none	unkno wn M		steel beam	lateral	попе	building	new construction	steel worker	1791
Struck by material	na 	па	na na			no crane		project slings	<u></u>	***********	n noue	0	4		lateral	none	bridge	new construction		1771
Struck by Material	na	na	na na				backhoe: project		turning bar :1	0	n none	unkno wn M	25	turning bar	none	none	none	unknown	Mechanic	1521
Struck by Material	na	na			··········		forklift pro		air compressor 1		u none w	unkno wn M		:	altering none	none	попе	unknown	Equipment operator	1522
Struck by material	na	na	9¢, no				none none	ne none	-	о	u none w	unkno wn M		lumber	lateral	scaffold	building	new construction	carpenter	1799
Struck by material	na	na	na na				3	ب	1		u none w				hoisting none	none	unknown	demolition	.5	1795
Struck by material	na	na	na na			yes truck		project none			u none v	unkno wn M		canister body	none	none	none	unknown	H	1799
Struck by material	na	<b>2</b> 2	na na		yes	pile yes drive	H	project none		0	none v	unkno wn M	4	pile	hoisting none	none	none	unknown	spotter	1629
Struck by material	na	na	in pe	impro per use n	***************************************	yes none		ne none		0	none v	unkno wn M	:		lateral	catwalk	advertisin g sign	unknown	unknown	1221

Struck by material na na na na yes no crane project none PM M 48 k wall hoisting none building demolition demolisher 1795	na	na I	па па	yes	es no	crane	project none	none	0	none	3:50 PM M 48	_ &	roof sections/bric k wall	ic hoisting none	none	building	demolition	building demolition demolisher 1795	1795
Struck by material na na	na		ou .9<			forklift project none	project	none	0			39 M	steel		none		unknown		1791
Struck by material		na	na na	2				tire inflator	0	none		[ 27			altering none	unknown	unknown unknown	concrete finisher	1771